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ABSTRACT

This document is a summary report of a 3-day conference held in November 1972 by the Health Occupations Teacher Education Program within the Division of Vocational Education of the University of Georgia. The conference focused on an emerging issue in health occupations education, articulation of programs. Basic problems in the health field are job nomenclature and competence specification, manpower planning, and educational planning to provide qualified personnel at all levels. Participants in the conference were leaders in allied health occupations and faculty and staff from four health specialties: dental auxiliaries, clinical laboratory, patient care, and respiratory therapy. The document includes a summary of the group sessions reports and participants' evaluation of the conference. The evaluation forms, conference participants and consultants, daily agenda, and supportive materials are appended. It was recommended that a series of workshops be held on curriculum modifications and that a center be established for the collection and dissemination of materials related to a sequential curriculum in allied health occupations. The conference proceedings and presentations will be issued separately. (MF)

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FINAL REPORT

Conference on Career Development and Program Articulation in Health

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Project Director

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Department of Health, Education, and Welfare
Bureau of Health Manpower Education
Regional Office IV

University of Georgia
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Division of Vocational Education
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Conference on Career Development and Program Articulation in Health

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FOREWORD

The Health Occupations Teacher Education Program within the Division of Vocational Education, College of Education, University of Georgia was established to serve health professionals whose career development has created the need for competencies related to effective functioning in the field of education. An ancillary responsibility for a teacher education program is to provide leadership for educational personnel to be aware of and informed about trends and issues in their respective fields. In view of this responsibility, the Health Occupations Teacher Education Program responded positively to a request from the Bureau of Health Manpower Education, Region IV to provide a regional conference which would focus on an emerging issue in health: namely, articulation of programs to permit progress from one job level to the next without unnecessary duplication of courses or prolongation of time spent in the educational program. It is widely recognized that in terms of manpower utilization it is impractical and unrealistic to require persons with specific competencies to meet clock-hour requirements in an educational program in order qualify for credentialing. Several alternatives have been proposed to counter existing policies which do not recognize an applicant's competencies; e.g. proficiency testing, equivalency testing, on-the-job training, and continuous progress curriculums.

In July of 1971, the American Hospital Association sponsored a national conference dealing with the concept of career mobility. Other national organizations and professional organizations in various health specialty areas have been looking at the continuous progress curriculum. Proficiency and equivalency examinations are being used, not extensively, but to some extent in certain areas of the health field. These emerging approaches to the recognition of job competence acquired other than in a traditional formal type of educational program are evidence that new approaches to credentialing may in the future be developed to permit competence credit in lieu of clock-hour credit. In view of these emerging trends and evidence of need for revising curriculums and performance standards related to credentialing of health workers, the Health Occupations Teacher Education Program

conducted a regional conference to provide opportunities for leadership personnel in the eight states of Region IV to discuss the feasibility of cooperative curriculum planning as a means of articulating health preparatory programs at two or more levels in selected health specialty areas. This conference was provided in response to a request from the Bureau of Health Manpower Education, Region IV, Department of Health, Education, and Welfare. This document is a summary report of the three-day conference, held in Atlanta, Georgia at the Sheraton-Biltmore, November 6, 7, and 8, 1972. Presentations by the consultants will be reproduced in the near future as "Conference Proceedings."

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Conference on Career Development
and Program Articulation

During the past decade there has been increasing public and professional concern directed to the problems of health delivery systems, health manpower needs, and preparatory programs for increasing the numbers of qualified personnel to staff health agencies. An issue of direct concern to educational planners is that of career ladders and lattices, proposed by some as a means of improving manpower utilization. This issue is receiving much attention in the current literature, but the activity seems to consist primarily of talk and conjecture about the potential of this concept to facilitate the preparation of health personnel. Unfortunately, an operative model seems to be lacking; in fact, any reports of detailed planning, implementation, and evaluation are difficult to locate.

The whole issue of career mobility is clouded by the present ambiguity of job titles, by lack of standardized nomenclature in the health field, and by continuing proliferation of job titles which do not indicate the incumbent's level of practice or specific competencies. This problem underlies the broader problems of manpower planning and educational planning, providing a common base for cooperative planning. Ultimately, there should be a set of correlated job-titles and educational programs, with mutual (employer - educator) agreement on the competencies required for graduation from a program and entry into employment at each level.

There is, then, an interrelatedness of these basic problems in the health field: job nomenclature and competence specification; manpower planning; and educational planning to provide qualified personnel at each of several levels of practice. (NOTE: In 1970, forty curriculums designed to prepare personnel at the less-than-baccalaureate level in eighteen different specialty areas were fundable through vocational education!)[1]

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[1] Department of Health, Education, and Welfare: Vocational Education and Occupations, 1970.

PURPOSES

The Conference on Career Development and Program Articulation was designed to bring opinion leaders and policy-makers in allied health occupations together with practitioners and teachers from four health specialties: dental auxiliaries, clinical laboratory, patient care, and respiratory therapy.

The purposes of the conference were as follows:

1. to provide opportunities for faculty members of basic preparatory programs in four areas of health to learn about methods for specifying functional differences between the entry-level and technical-level workers;
2. to encourage curriculum planning based on performance specifications for the level of practice at which graduates of basic health programs would enter employment;
3. to stimulate discussion of the implications of occupational analysis for a) instructional planning, b) performance specification, and c) job classification;
4. to provide opportunities for faculty members of two or more levels to interface through discussion of common problems and concerns; and
5. to encourage discussion among faculty members of programs at various levels regarding the feasibility of cooperative curriculum planning, to provide articulation between the programs without unnecessary duplication of course content for the student.

PARTICIPANTS

The health occupations supervisors in the eight states of Region IV were asked to submit a list of persons who should be informed about the conference. Announcements (Appendix A) were sent to each person named by the health occupations supervisors and also to the following: 1) officers of dental assisting and dental hygiene professional organizations,

2) officers of the medical laboratory organizations, 3) faculty and/or coordinators of practical nursing programs in Georgia, 4) respiratory therapists (as names were obtained from a variety of sources), 5) persons who had previously requested notification of activities conducted by the Health Occupations Teacher Education Program at the University of Georgia, and 6) deans of schools of allied health in the eight states of Region IV.

The announcement was received enthusiastically throughout the Region; however, because of conflicts with this scheduling, many persons who wished to attend could not do so. Final registration for the conference totaled 81, representing each of the eight states in Region IV. A list of partitipants is provided in Appendix A.

PROGRAM

Design

The program for the conference was designed to lead the participants through the following sequence: 1) awareness of selected concepts from economics related to manpower and educational planning, 2) understanding of occupational and task analysis as methods for studying occupational performance requirements, 3) involvement in discussing possible applications of economics concepts and task analysis to planning for manpower and training needs in health, 4) involvement in the process leading from analysis of a task to formulation of instructional objectives, 5) awareness of the trend toward secondary level programs in health careers, 6) recognition of commonalities in instructional content of some educational programs which prepare personnel for the health field, and 7) consideration of an example of a sequential curriculum design which resulted from occupational analysis of performance requirements at several levels within a health specialty area.

Program Consultants

The consultants selected to assist in presenting this program possessed expertise and direct personal experience in one or more components of the sequence described above. Three members of the Allied Health Professions Project at the University of California at Los Angeles reported on their

particular components of that extensive project: Dr. Thomas Freeland, Mrs. Lucile Wood and Miss Diane Watson. Mrs. Barbara Killen, an economist-educator with extensive involvement in planning for the health field, presented economics concepts related to program-planning in health.

A resume of the background and experiential qualifications of each consultant is provided in Appendix B. Also in Appendix B is a list of those who participated on the panel "Innovative Approaches in Allied Health Occupations Education," served as group leaders, or presided at one or more general sessions. These volunteer participants represented four different health specialties, three functional levels (local, state, and regional) and each of the eight states in Region IV.

Results

Presentations of the four consultants are being transcribed for dissemination to conference participants and other interested persons. The supportive material provided by the keynoters for their presentations is included in this report as Appendix C. This material is organized in chronological sequence and separated by the color-coded sheets used for the conference program. Omitted from the supportive materials are approximately twenty five sheets which were included in participants' programs for "controlled note-taking"- space under the major heading of each keynoter's presentation. These sheets also served to direct the activities in task analysis.

In addition to the Conference Proceedings, to be issued later, the results of the conference include group reactions resulting from state caucuses and discussion groups. For purposes of this report, the group reports have been compiled without reference to their source (specific group). The following summary, then, constitutes a compilation of main ideas which emerged during group activities:

1. A centralized information center is needed for the sharing of information, ideas, materials, and curriculum guides among states and among the different health specialty areas.

2. In order to improve the cost-effectiveness base for allied health occupations, we need to find ways of a) giving credit for demonstrated competence, b) measuring an applicant's "real" competence, c) developing proficiency tests which measure both theoretical information and ability to perform, d) developing course challenge exams which are fair and which assure that those who pass have the desired competencies.

3. Faculties of programs need to plan cooperatively if programs at two different levels are to be articulated; i.e. the upper level program curriculum should be organized so that advanced placement is possible for graduates of the lower level programs.

4. Proficiency tests to be used for credentialing (on the basis of non-traditional learning experiences) or advanced placement should be developed as a cooperative adventure of faculty members from both programs.

5. An employing health agency should have a planned, formal orientation program to assist new graduates of any preparatory program to fit into the agency's organizational structure.

6. Any allied health occupations curriculum should prepare students to fulfill the responsibilities they will be expected to assume when they enter employment.

7. Allied health occupations programs should teach students about their roles -- limitations as well as responsibilities.

8. Practitioners should have lateral as well as vertical mobility available to them.

9. Some components of preparatory programs should be individualized to permit self-pacing; proficiency testing can assure that the student has achieved the desired competence regardless of the number of clock-hours invested in the learning experience.

10. Curriculum development is a time-consuming process requiring specific skills; there is need for curriculum specialists in allied health to work with faculties in developing cost-effective instructional programs.

11. There is need for standardization of job titles and clarification of performance requirements of jobs in the health field.

12. Health services should be provided to patients at the least possible cost; this will require cost-effective educational programs and efficient utilization of all health personnel.

13. Interpersonal skills, needed by health workers at all levels, should be a component of the preparatory program.

13. Interpersonal skills, needed by health workers at all levels should be a component of the preparatory program.

14. The Allied Health Professions Project materials -- specifically, the occupational analyses -- can be adapted in each local area as basic materials for instructional planning. These materials represent a tremendous effort -- perhaps 99% of the "spade work" for instructional planning.

15. The occupational task lists reported by the AHPP have been submitted to large numbers of reviewers and probably have a high level of validity for current practice.

16. We need to get away from thinking that adding more and more education assures higher levels of competence; this is a false assumption.

17. The AHPP methodology appears useful for studying existing curriculums in health specialty areas.

18. Task analysis is a logical starting point for instructional planning; it has the advantages of efficient use of time and effort for both teacher and student.

19. There needs to be better communication among disciplines in the health field.

20. Legislators are beginning to look at the cost factor in the education of health workers; the legislature in one state is already conducting a cost analysis for each program offered in the public education system.

21. The AHPP has produced a large volume of material at considerable public expense; it is not reasonable for others to attempt to duplicate this effort other than to validate questionable components in the local situation.

22. While radical curriculum revision may require "bucking the system," policies can be formulated to permit minor curriculum revisions and advanced standing based on proficiency testing.

23. Methods for selecting students should be revised; educational preparation of health workers should be competency-based; clock-hour requirements for completion of a program do not assure competence; the question of who is to initiate changes in legislation, regulations, standard-setting and credentialing, needs to be resolved.

24. The majority of faculty members in allied health occupations programs probably would not buck the system but would wait for credentialing agencies to take the leadership in bringing about a competency-based approach to credentialing and/or educational planning.

25. A program to prepare personnel for patient care could have one entrance point and several different spin-off points.

26. There should be coordination between hospital programs preparing health workers, vocational education programs, and junior college programs.

27. Obstacles to program articulation include the following:

    a. Sources of financing for different types of programs (e.g. hospitals, colleges or universities, school districts, postsecondary institutions, private institutions) set standards for the programs which result in diversity of graduates, overlapping between and among roles, and duplication of training opportunities.
    b. Standards for faculty differ according to the sponsoring agency: standards in community colleges differ from standards in private or health-agency-based programs; requirements for teachers in high school health programs differ from all of these.
    c. Differing philosophies are reflected in widely different approaches to selection of learning experiences for students. There is need to extend the use of competency and challenge tests in order to permit advanced standing for graduates of lower-level programs. Faculty members of allied health occupations programs should partipate in educational planning conferences.

28. Articulation of educational programs at two or more levels is economical of time and money. By means of a sequential curriculum, some students could complete the program and be on the job as a contributor to health services in a shorter period of time than is generally required by clock-hour requirements.

29. Some state education agencies are moving toward a policy which would require a) that vocational programs articulate with junior college programs and b) that graduates of the vocational level program be permitted to qualify for advanced standing. Articulation can be interpreted to mean either a sequential curriculum, transferable credits, or both.

30. There is an experimental program which admits licensed practical nurses and qualifies them for professional nursing examination in a four-quarter program.

31. Faculty members in general are currently somewhat negative toward advanced placement for graduates of lower-level programs.

32. Some faculty members, particularly in higher-level programs, are opposed to task-oriented instructional planning.

33. According to an instructor who is using the Career Model for Nursing, the material is proving useful for preparing personnel for patient care. She found it necessary to prepare additional program materials, including guides and assignment sheets; once this material had been prepared, the sequential curriculum proved easier to implement than the traditional type of curriculum. Students adjusted to the materials readily and faster students showed a tendency to help slower students so that the class as a whole could move forward.

34. The viewpoint of a director of nursing service -- "the consumer of the product of a preparatory allied health occupations program":

    a. Nursing service should be asked to participate in evaluation of performance of advanced students or graduates;
    b. Practical nurses are confused with registered nurses by the public and others;
    c. There continues to be some role-confusion between registered nurses and practical nurses;
    d. Licensure is not an assurance of competence on the part of the practitioner.

35. In teaching aide-level programs, it has been found that potential students view the aide role as low-status unless it is designed for a specialty area, such as psychiatric aide or pediatric aide.

In addition to these ideas expressed during group discussions, a number of questions were raised. Some questions were answered by other members of the group, while others remained unanswered. The following questions could serve as focal points for future conferences:

1. How can technical education in a hospital or a vocational school be recognized for academic credit in an institution of higher learning?

2. Who has had personal experience with a sequential program with several different exit points? (The group responded negatively to this question, but one member pointed out that Emory University now has such a program in Physical Therapy.)

3. In a sequential program related to patient care, what would be the exit points? (Members of the group discussed this question and concluded that the first exit point would be to a job with the title of aide, and the second exit point would be at the practical nurse level; in order for there to be a third exit point, a cooperative arrangement with a junior college would have to be worked out.

4. How does career education relate to the problems we are discussing here? (Miss Watson suggested that the Health Careers Orientation Program be instituted no later than grades seven, eight and nine; this should be followed in grades ten, eleven, and twelve by actual participation in job skills. The job experiences would be exploratory, to introduce the student to several different career possibilities. Following these experiences the student should be better prepared to make a vocational decision: whether or not to enter the health field, which specialty area of the health field to enter, and which level to view as the first career goal.)

5. How does this secondary program relate to specific jobs in the health field? Do students complete the program fully prepared for a particular job in health? (According to Miss Watson, the student's age and titles of particular jobs should not be emphasized at this level. Tasks should be selected for their exploratory value; the student should have a record which shows potential employers which skills he has learned to perform. Then, if the student does seek employment, the employer will have in writing an overview of what the student can do. Assignment of a job title to the high school program could be confusing to the high school program and could be confusing to students and future employers.)

Summary of Group Reports

In general, the group reports indicate participants' awareness of problems which face faculty members, students, and employers alike. While pat answers were not forthcoming, there was a willingness to exchange ideas and to examine new ideas and task analysis methodology objectively. Most participants indicated readiness for cooperative planning with their counterparts in the employing health agency or with faculty members of other programs.

It would appear, however, that among these participants -- opinion-makers and policy-makers in the health and education fields -- no one emerged as ready, willing and able to assume leadership in bringing about some of the changes which the majority agreed are needed. The group discussions provided a free exchange of ideas, with little if any antagonism or obstructionism expressed. This in itself is encouraging evidence of change in perceptions of what "should be" in allied health occupations!

EVALUATION

Forms used for participants to evaluate the conference are shown in Appendix B. It will be noted that these forms provide a rating scale extending between two polar statements, one negative and the other positive. This scale permits the respondent to rate an item positively or negatively, with the strength of reaction indicated by proximity of the rating to the polar -- or extreme -- position; the central numeral, five, indicates a zero or neutral rating.

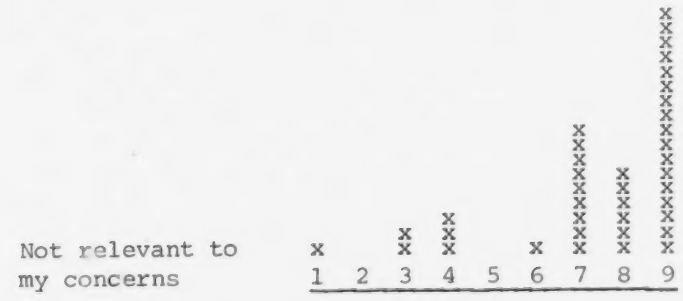
The evaluation form also provided space for free responses. In addition, the evaluation form for Wednesday requested suggestions for the main focus of future regional conferences. The evaluation procedure, then, provided 1) ratings of individual components of the conference, 2) ratings of the conference as a whole, 3) comments about the conference, and 4) suggestions for the focus of future conferences.

Ratings on a Nine-Point Scale

The figures on the following pages represent graphs to show the distribution of responses on each evaluation item.: Since group sessions were used primarily for discussing the presentations, only tentative plans were formulated; therefore, the scheduled session on action plans was omitted from the Wednesday program. Item twelve, pertaining to Reports of Action Plans, was omitted from participants' evaluation of the Wednesday program.

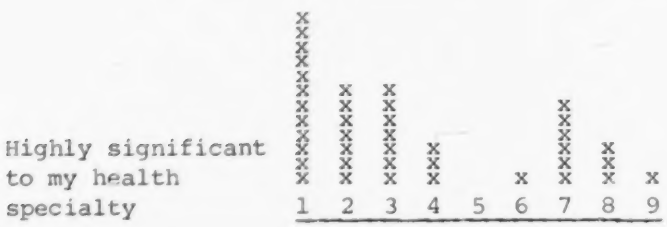
EVALUATION: MONDAY*

1. AN ECONOMIST-EDUCATOR LOOKS AT EDUCATION PROGRAMS IN RELATION TO PERSONNEL NEEDS IN ALLIED HEALTH OCCUPATIONS

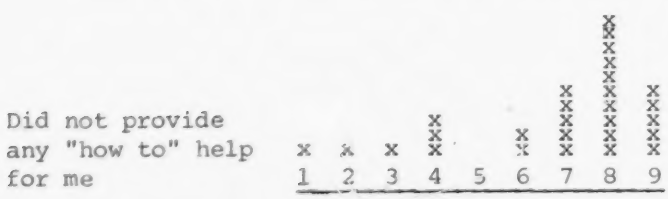


* Ratings at the poles are strong, decreasing in strength as they approach the neutral (5) position.

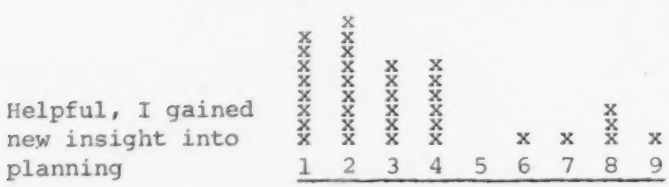
2. ALLIED HEALTH PROFESSIONS PROJECT:
OVERVIEW OF CURRICULUM DEVELOPMENT PROCESS



3. GROUP SESSION: REVIEW OF AHPP OCCUPATIONAL INVENTORIES

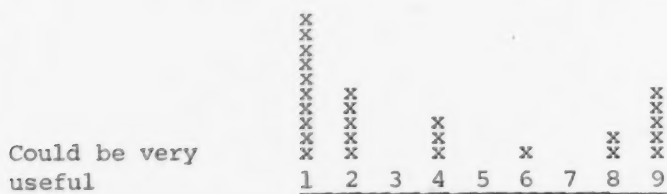


4. GROUP SESSION: REACTION TO AHPP METHODOLOGY

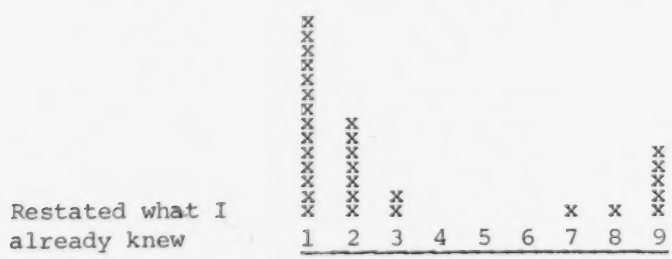


EVALUATION: TUESDAY

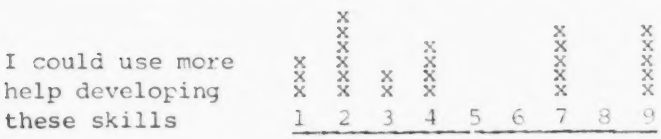
5. METHOD AND PROCEDURE FOR JOB OPERATION BREAKDOWN



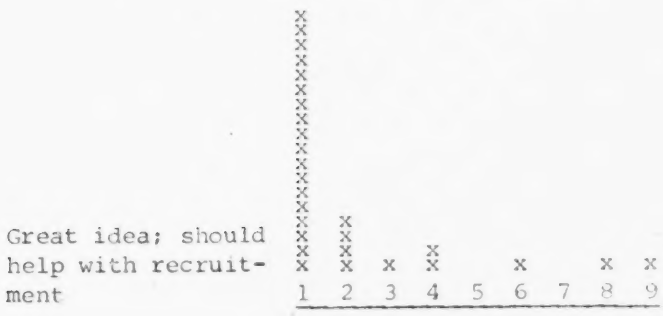
6. HOW TO DEVELOP PERFORMANCE STATEMENTS



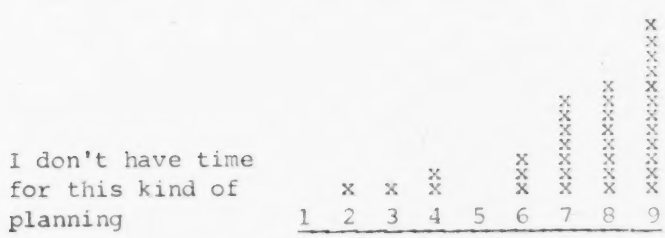
7. GROUP PRACTICE IN J.O.B. AND SPECIFYING LEARNING OUTCOMES



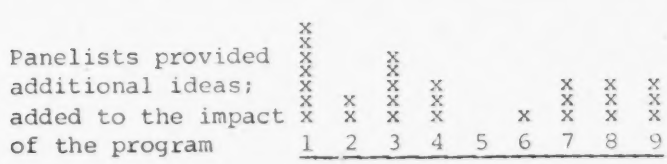
8. CAREERS IN HEALTH SERVICES PROGRAM - SECONDARY LEVEL



9. CONSIDERATIONS IN DESIGNING CURRICULUM FOR CAREER DEVELOPMENT

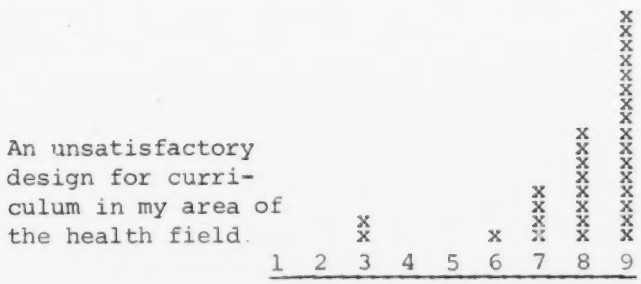

I don't have time for this kind of planning
1 2 3 4 5 6 7 8 9
Makes good sense; a faculty should give it a try before deciding whether or not it will work

10. PANEL DISCUSSION: REACTIONS TO PROGRAM TOPICS

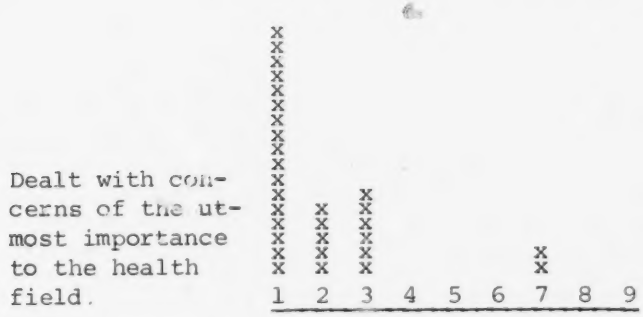

Panelists provided additional ideas; added to the impact of the program
1 2 3 4 5 6 7 8 9
Lost on me; added little to the ideas already presented

EVALUATION: WEDNESDAY

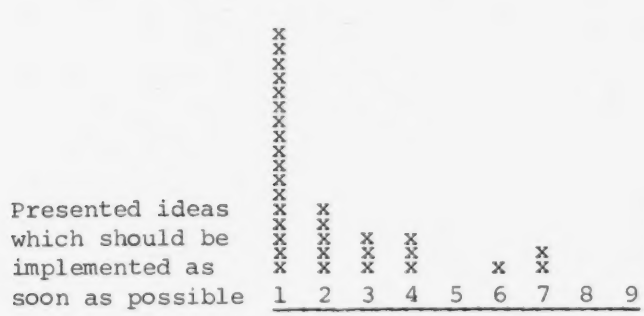
11. THE CAREER MODEL


An unsatisfactory design for curriculum in my area of the health field
A well-designed educational model, should solve some problems in the health field
1 2 3 4 5 6 7 8 9

13. THE CONFERENCE AS A WHOLE


Dealt with concerns of the utmost importance to the health field.
Should have been directed to other, more important matters in the health field.
1 2 3 4 5 6 7 8 9

14.


Presented ideas which should be implemented as soon as possible
Ideas presented are of little practical value in my area of the health field
1 2 3 4 5 6 7 8 9

Comments Pro and Con

The following list includes all comments elicited from participants by the evaluation sheets. For the most part, these have been reproduced verbatim without interpretation. Where editorial explanation appeared necessary, the comment is provided in parentheses.

"I'm looking forward to tomorrow and Wednesday." (On Monday evaluation form)

"I need to think and learn more about this in its totality."

"Should have had more time on the AHPP model with it leading into a discussion of the career model. The economics presentation could have been covered with the handout."

"This is the type of meeting allied health coordinators should hold more often."

"Very Good!"

"These are not derogatory comments. I feel, perhaps, I may have contributed something and learned what others are doing." (Apparently the first sentence refers to somewhat weak ratings of the Monday presentations.)

"Nothing concrete!" (Comment related to item number four, group session for reactions to AHPP methodology)

"A very informative session. Discussions tended to bog down on philosophical disagreements and feelings of insecurity related to professional jealousy."

"I was able to listen and learn much. As a newcomer to this field, I have much to learn."

"None was too very relevant to service, but extremely useful in getting me on target." ("Service" refers to "nursing service.") "Although she had to win me over!" (Refers to item eight, rated one (1) -- extremely high- on "Great idea; should help with recruitment.")

"Feel some presentations could have used methodology proposed for programs rather than reading lecture notes."

"Useful, interesting -- both in presentations and in opportunities to share ideas and problems with others in health programs."

"Subjects should be organized to bring content to a connected circle and elaborate more in the basic situations, not more unusual areas."

"The basic ideas were stimulating, but I was "turned off" by some of the presentations. The basic ideas seem to be usable but content on the practical implementation was lacking. Also the Career Model for Nursing with its five levels is not new. We now have too many levels. I can't see this clearing up issues in nursing education."

"Needed to ask the panel some questions."

'I personally would like to see more of these but in each specific job description level; example: nursing, dental, respiratory therapy, etc."

"Very good conference!"

"Good -- good conference. Thank you."

"A useful and meaningful conference."

"I think this conference was one which certainly stimulated educators in the health field."

"A stimulating, thought-provoking conference."

"An informative conference. However, information and materials presented in AHPP did not seem to present any new concepts. Conference could have started on a somewhat higher level. All considered -- a good conference!"

"Much material presented from the UCLA Allied Project was a reiteration of information already in hand."

"Excellent conference. Beautiful staff from AHPP. Thank you!"

"Informative and very much-appreciated conference. Thank you for all the work involved."

"This has been a most interesting conference. I am very glad I had the opportunity to attend.

"I am anxious to get started."

"State meetings needed organization."

"No specific objectives."

"Very good conference!"

"Most of the material was repetitious to me even though it is very relevant."

"UCLA AHPP group were too concerned with "teaching" conference participants about their "project." The conference would have been very beneficial if the AHPP group had attempted to meet the objectives of the conference."

"A good conference."

Obviously, the majority of the comments are positive. Those few which have negative connotations never-the-less contain valuable feedback for future conference planning. A number of participants took advantage of the opportunity to suggest ideas for future conferences:

1. Review of programs directly involved in program articulation, rather than a review of a model that has not been tried;
2. Get more South Carolina representatives here;
3. How to determine amount and depth of general education to be included and articulate with B.S. programs for the A.S. graduate;
4. Administrative implementation;
5. Will consider several and send our thoughts to Mr. Brown;
6. A follow-up -- are we doing what we have been talking?;
7. A program involving those responsible for the planning and administration of health delivery with those responsible for similar activities in allied health occupations education;
8. Accreditation, registration, certification, and licensure problems of health workers;
9. Leadership development workshop;
10. Job, course, curriculum definitions;
11. Conference to focus on curriculum development;
12. Present-day situations in health career fields; plans for new programs;
13. The focus for the next regional conference should be to go back home and work with designing educational models suitable to your own need.

Miscellaneous Feedback

It is noteworthy that a number of letters have been received since the conference, expressing appreciation and in some cases indicating definite follow-up action:

> ". . . met with representatives from schools -- vocational level through masters level. Fifty-two attended the meeting. That was something on such short notice. In 1973, we plan to push forward as many of these ideas as possible. Higher levels of education may be slow."
>
> ". . . The conference on career development was most informative. We feel that we received much which will be useful in our particular situation . . ."
>
> ". . .(a specific program) is admitting fifteen of their graduate practical nurses in June 1973 and plans to graduate them as associate degree nurses in June 1974. There is yet so much to be done in all areas -- secondary and postsecondary, but we have to sell one step at a time . . ."
>
> AND . . .
>
> from the Far West:
>
> "On November 1, 1972 the New Mexico Department of Vocational Education funded a career ladder project entitled Studying and Establishing Generalized Criteria for All Levels of Nursing Education to Facilitate the Career Ladder Concept for Nurses in New Mexico . . . Will you be writing up the proceedings from your "Conference on Career Development and Program Articulation in Health" held in Atlanta in November? If so, could you send me a copy of your program? . . . Do you have ideas and materials related to career mobility that you could share with us? . . ."

SUMMARY AND CONCLUSIONS

It would appear that the Conference on Career Development and Program Articulation was viewed as a meaningful and worthwhile conference by those persons who participated. It would appear also that the concept of career mobility is gaining acceptance and that faculties are seeking effective models for curriculum innovations. Group reports and responses of individual participants indicate the need for follow-up activities, in which

participants could become directly involved in producing materials (e.g. philosophical statements, guidelines, policies, and/or instructional materials) to assist those who wish to revise curriculums. It is possible that a center for collecting, reproducing, and disseminating instructional materials will be essential to encourage (1) systematic methods for curriculum revision and (2) field-testing, rather than isolated trial-and-error approaches.

On the basis of formal and informal evaluations transmitted to the Conference Director, the following recommendations are hereby offered:

1. That a series of workshops be provided in each of the eight states of Region IV, to permit faculties and relevant persons for each health specialty area to become involved in decision-making related to the curriculum modifications appropriate for that state; and

2. That a center be established for the collection of position papers, research data, and instructional materials related to a sequential curriculum in allied health occupations, and that dissemination of such materials become a major responsibility of the center.

In summary, this conference has revealed the readiness of many faculty members and administrators for revising traditional curriculum patterns in allied health occupations to provide more realistic approaches to manpower and training needs in the health field. It is clear that leadership in this effort is needed, however, lest the hoped-for solution be snuffed out under the pressure of daily tasks and administrative demands.

Appendix A

Announcement of Conference

Participants, Conference on Career Development and Program Articulation

Place stamp here.

Mary Elizabeth Milliken, Ed.D.
Health Occupations Education
Division of Vocational Education
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* A C O N F E R E N C E *

ON

CAREER DEVELOPMENT

AND

PROGRAM ARTICULATION

IN

ALLIED HEALTH OCCUPATIONS

OR

Sheraton-Biltmore Hotel
Atlanta, Georgia
November 6-8, 1972

Conducted by the

Health Occupations Education Program
Division of Vocational Education
College of Education
University of Georgia

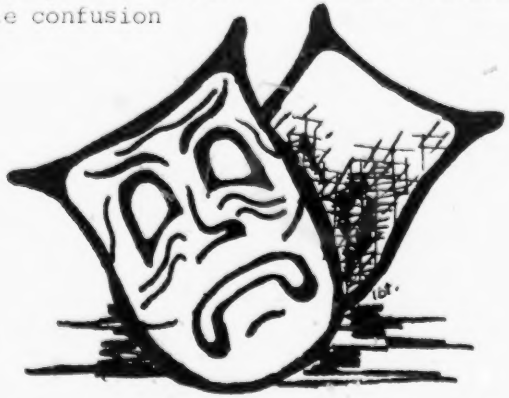
for the

Bureau of Health Education Manpower

Problems and issues in the health field are many and varied - some old, some new.

Tired of talking about the problems?

Chronic personnel shortages - Fragmented services - Barriers to change - Limited career options - High attrition rates - Dead-end jobs - Overutilization - Role limitations - Underutilization - Job title proliferation - Maldistribution - Role confusion



Ready to talk about solutions and alternatives? Join us in Atlanta to assist in determining how the manpower problem of the health field can be resolved.

THE CONFERENCE ON

CAREER DEVELOPMENT AND PROGRAM

ARTICULATION IN HEALTH

A conference designed to focus on the methods of the UCLA Allied Health Professions Project as a means for studying job performance at two or more levels in selected areas of the health field.

THREE KEY MEMBERS OF THE PROJECT TEAM,

Dr. Thomas Freeland,

Mrs. Lucile Wood,

Miss Diane Watson,

will report on the methods and procedures used and the application of findings to curriculum development.

AN ECONOMIST LONG ASSOCIATED WITH HEALTH,

Mrs. Barbara Killen,

will discuss health manpower problems from the economist's view. All consultants will serve as resource persons for group meetings -

(1) to discuss with groups from each state of Region IV the pros and cons of career development programs to supplement existing educational programs preparing health practitioners, and

(2) to consider with individual occupational groups the feasibility of articulating health programs to provide a sequential curriculum through two or more levels.

Please detach, affix stamp and mail.

PREREGISTRATION FORM

NAME _____ Health Specialty: Med Tech ___; RDH ___;
CDA ___; RN ___; EMT ___; RPT ___; OT ___;
ADDRESS _____ or Tech ___.
Other (specify) _____
Business Address _____

POSITION _____

Highest degree earned (circle one): Bacc Masters Doct Teaching Experience __-__ yrs.

Experience as a health practitioner ___ yrs. Reason for applying _____

NOTE: This application form should be returned by October 15th to enable us to prepare your workbook.

SIGNED _____

Conference on Career Development
and Program Articulation in Health

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Appendix B

Resumes of Consultants

Program Participants
(Panel, group leaders, etc.)

Evaluation Forms
Monday, Tuesday, Wednesday

Resume: THOMAS E. FREELAND

PRESENT POSITION

Dean, School of Health Related Professions University of Mississippi Medical Center Jackson, Mississippi	July 1972 - present

EDUCATION

University of Southern California, Ph.D. Major studies: Physiology, Research Design, Statistics.	1971
Long Beach State College, M.A. Major: Education	1965
Lock Haven State College, Lock Haven, Pa., B.S. Major: Health Education	1962

PROFESSIONAL EXPERIENCE

Dean, School of Health Related Professions University of Mississippi Medical Center Jackson, Mississippi	July 1972 - present
Allied Health Professions Project Division of Vocational Education University of California Los Angeles, California	1969 - 1972
Visiting Associate Professor University of Southern California Los Angeles, California (Lecturer in Physiology of Exercise)	September 1971 - July 1972
Instructor University of Southern California Los Angeles, California (Kinesiology - Experimental Studies in Human Performance)	1968 - 1969
Teaching Assistant University of Southern California Los Angeles, California	1965 - 1968
Teacher Elkland High School Elkland, Pennsylvania	1962 - 1964

PUBLICATIONS

Report "National Technical Advisory Committee for Electroencephalographic Technicians," September 1969.

"A Study of Electroencephalographic Technician Occupations," April 1970.

Report "National Technical Advisory Committee for Respiratory Care," May 1970.

"Respiratory Care/Inhalation Therapy," October 1971.

"The Dental Auxiliary Occupations," Revised, February 1971.

"A Study of the Clinical Laboratory Occupations," August 1971.

"A Study of the Radiology Technician Occupations, Publication Pending.

A Model of Individualized Instruction for the Clinical Laboratory Occupations, H. Taub, February 1972 (Supervisory Responsibility).

A Survey of Practices in Hospital Pharmacies, T. Cullen, December 1971 (Supervisory Responsibility).

Medical Records Terminology/Circulatory System, M. Gosman (Supervisory Responsibility)

Medical Records Terminology/Digestive System, M. Gosman, (Supervisory Responsibility)

Nursing, Stage I, Lucille A. Wood (Supervisory Responsibility)

Inhalation Therapy/Respiratory Care Instructional Materials (Editor)

Electrocardiographic Technicians Instructional Manual (Co-author)

Resume: MARY BARBARA KILLEN

PRESENT POSITION

Coordinator of Occupational and Placement Programs General College University of Minnesota	1970 - present

EDUCATION

U.S. Naval Hospital Corps School San Diego, California	1943
University of Minnesota B.S. in Agricultural Economics and Homes Economics Education	1949
University of Minnesota M.S. in General Economics and Marketing	1951

EXPERIENCE

University of Minnesota

Coordinator of Occupational Placement Programs	1970 - present
Faculty, University of Minnesota Independent Study Course for Health Facility Administrators	1969 - present
Faculty, University of Minnesota Public Health, Master's Program in Hospital Administration	1969 - 1970
Coordinator of Educational Referrals for the Minnesota MEDIHC Program	1970 - 1972
American Rehabilitation Foundation	1966 - 1970
Extension Marketing Specialist, University of Minnesota	1965 - 1966
Lecturer, Department of Economics, University of Minnesota	1959
Teacher and Research Assistant	1948 - 1952
Senior Baille Instructor in Rehabilitation, U.S. Naval Hospital, Philadelphia, Pennsylvania	1944 - 1946

ADVISORY AND CONSULTANT ASSIGNMENTS

Minnesota Hospital Research and Educational Trust
Humanic Designs Corporation
Wisconsin Advisory Council on Vocational Education - Advisory

ADVISORY AND CONSULTANT ASSIGNMENTS (cont'd)

Boards: Physical Therapy Assistant
Occupations Therapy Assistant
Medical Laboratory Assistant
Certified Laboratory Assistant
Bio-Equipment Technician
Human Services Generalist
Legal Assistant-Administrator
Respiratory Technician
Minnesota Health Careers - MEDIHC
Medical Institute of America

PUBLICATIONS

Smith, Anita; Killen, M. Barbara; Kovener, R. Introduction to Rehabilitation, 1967.

Killen, M.B. "Supportive Personnel in Physical Therapy." Journal of American Physical Therapy Association, June 1967.

Killen, M.B.; Jones, S.; and Johannes, A. "Commonalities in Training Programs for Supportive Personnel: Physical Therapy and Occupational Therapy." Journal of American Physical Therapy Association, November 1968.

Killen, M.B., and McNicoll, R. Commonalities in Training Programs for Supportive Personnel, Part II, Social Work Aides and Assistants, 1968.

Killen, M.B., and McNicoll, R. Commonalities in Training Programs for Supportive Personnel, Part III, Mental Health Assistant Training Programs, November 1969.

Killen, M.B. and Shectman, J. "How Do You Decide on a Health Occupations Program?" American Vocational Journal, May 1969.

Killen, M. Barbara Direct Patient Care; Second Edition, University of Minnesota, 1972.

Killen, M. Barbara, and McNicoll, R. Commonalities in Training Programs for Laboratory Assistant Programs, September 1970.

Killen, M. Barbara, and Davis, Donna A Syllabus and Bibliography on Social Services in Long-Term Health Care Administration, Ames, Iowa: University of Iowa, October 1970.

Killen, M. Barbara The Career Women's Dilemma, November 7, 1970.

Killen, M. Barbara "Expanding Role of Professionals in Rehabilitation Disciplines" In Proceedings: Association of Schools of Allied Health Professions Annual Meeting, November, 1970.

Resume: DIANE E. WATSON

PRESENT POSITION

Specialist, Health Occupations — 1971 - present
Bureau of Industrial Education
Vocational Education Section
California State Department of Education

EDUCATION

California State University — 1967
Los Angeles, California
Master of Science in School Psychology

University of California
Los Angeles, California
Bachelor of Arts
Major - Education; Minor - Sociology

Los Angeles City College — 1952
Associate Arts Degree

EXPERIENCE

Specialist, Health Occupations — 1971 - present
Bureau of Industrial Education
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California State Department of Education

Deputy Director, Secondary Schools — 1969 - 1971
Allied Health Professions Project

Associate Professor — 1969 - 1970
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Los Angeles, California

School Psychologist — 1968 - 1969
Los Angeles Board of Education

Assistant Principal — 1963 - 1968
Los Angeles Board of Education

Civilian Teacher — 1960 - 1963
Department of the Army
Assignments in Okinawa and France

Elementary Teacher — 1956 - 1960

CONSULTANT ASSIGNMENTS

Committee on Career Education in the
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McGraw-Hill Publishing Company
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Resume: LUCILE A. WOOD

PRESENT POSITION

Allied Health Professions Project University of California at Los Angeles Associate Director for Nursing	1970 - present

EDUCATION

University of Tulsa Bachelor of Science Major: Nursing	1957
University of California at Los Angeles Master of Science Major: Nursing Administration	1965

SPECIALIZED PREPARATION

Operating Room Management and Technique Michael Reese Hospital Chicago, Illinois	1949
Public Health Nursing California Department of Public Health	1966

EXPERIENCE

Allied Health Professions Project University of California at Los Angeles Associate Director for Nursing	1970 - present
Director, School of Vocational Nursing Holy Cross Hospital Mission Hills, California	1966 - 1970
Associate Director, Nursing Service Cedars of Lebanon Hospital Los Angeles, California	1965 - 1966
Administrative and supervisory positions in hospitals and medical centers of Oklahoma, West Virginia, Georgia, and Texas	1955 - 1963
Nursing experience in Emergency Room and Central Supply, Operating Room and Medical Offices	1949 - 1955

PUBLICATIONS

A Study of Nursing Occupations, Los Angeles: UCLA Allied Health Professions Project, April 1970, (Coauthor).

Summary Report of the Nursing Occupations, Los Angeles: UCLA Allied Health Professions Project, April 1970.

Nursing Occupations Progress Report, Los Angeles: UCLA Allied Health Professions Project, April 1971, (Coauthor).

Nursing Skills for Allied Health Services, Volumes I and II, Philadelphia, Penn., W.B. Saunders Co., 1972, (Editor).

"Purposeful Change: A Developmental Model," California Nursing Education (1:1) February 1972.

Career Model for Nurse Practitioners, Los Angeles: UCLA Allied Health Professions Project, March 1972.

Conference on Career Development

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MEM/lbt

MONDAY

CONFERENCE EVALUATION

Directions: Please circle one numeral to rate each program topic on the continuum provided.

1. AN ECONOMIST-EDUCATOR LOOKS AT EDUCATION PROGRAMS IN RELATION TO PERSONNEL NEEDS IN ALLIED HEALTH OCCUPATIONS

Not relevant to my concerns — 1 2 3 4 5 6 7 8 9 — Spoke to important concerns in health

2. ALLIED HEALTH PROFESSIONS PROJECT: OVERVIEW OF CURRICULUM DEVELOPMENT PROCESS

Highly significant to my health specialty — 1 2 3 4 5 6 7 8 9 — I do not see any application to my area of the health field

3. GROUP SESSION: REVIEW OF AHPP OCCUPATIONAL INVENTORIES

Did not provide any "how to" help for me — 1 2 3 4 5 6 7 8 9 — Could be a useful method for attacking my problems

4. GROUP SESSION: REACTION TO AHPP METHODOLOGY

Helpful; I gained new insight into planning — 1 2 3 4 5 6 7 8 9 — Provided no clarification or new ideas for me

COMMENTS PRO AND CON:

PLEASE LEAVE THIS SHEET WITH THE DISCUSSION LEADER MONDAY AFTERNOON.

THANK YOU.

SEE YOU TUESDAY MORNING.

CONFERENCE EVALUATION

Directions: Please circle one numeral to rate each program topic on the continuum provided.

5. METHOD AND PROCEDURE FOR JOB OPERATION BREAKDOWN

Could be very useful 1 2 3 4 5 6 7 8 9 Of little or no use to me

6. HOW TO DEVELOP PERFORMANCE STATEMENTS

Restated what I already knew 1 2 3 4 5 6 7 8 9 Helped me to see the value of clearly stated outcomes

7. GROUP PRACTICE IN J.O.B. AND SPECIFYING LEARNING OUTCOMES

I could use more help developing these skills 1 2 3 4 5 6 7 8 9 Strictly "old hat" to me

8. CAREERS IN HEALTH SERVICES PROGRAM - SECONDARY LEVEL

Great idea; should help with recruitment 1 2 3 4 5 6 7 8 9 I don't believe health programs should be at the high school level

9. CONSIDERATIONS IN DESIGNING CURRICULUM FOR CAREER DEVELOPMENT

I don't have time for this kind of planning 1 2 3 4 5 6 7 8 9 Makes good sense; a faculty should give it a try before deciding whether or not it will work

10. PANEL DISCUSSION: REACTIONS TO PROGRAM TOPICS

Panelists provided additional ideas; added to the impact of the program 1 2 3 4 5 6 7 8 9 Lost on me; added little to the ideas already presented

COMMENTS PRO AND CON:

PLEASE LEAVE THIS SHEET WITH THE MONITORS AT THE DOOR AS YOU LEAVE.

THANK YOU.

SEE YOU WEDNESDAY MORNING.

CONFERENCE EVALUATION

Directions: Please circle one numeral to rate each program topic on the continuum provided.

11. THE CAREER MODEL

An unsatisfactory design for curriculum in my area of the health field — 1 2 3 4 5 6 7 8 9 — A well-designed educational model; should solve some problems in the health field

12. REPORTS: AFFIRMATIVE ACTION PLANS

Stimulating; glad to hear some new challenges being accepted — 1 2 3 4 5 6 7 8 9 — Strictly Dullsville; who really believes anything will change?

13. THE CONFERENCE AS A WHOLE

Dealt with concerns of the utmost importance to the health field — 1 2 3 4 5 6 7 8 9 — Should have been directed to other, more important matters in the health field

14.

Presented ideas which should be implemented as soon as possible — 1 2 3 4 5 6 7 8 9 — Ideas presented are of little practical value in my area of the health field

COMMENTS PRO AND CON:

WHAT SHOULD BE THE MAIN FOCUS OF THE NEXT REGIONAL CONFERENCE, IN YOUR OPINION?

PLEASE LEAVE THIS FORM WITH THE MONITORS AT THE DOOR AS YOU LEAVE.

THANK YOU FOR COMING.

HAVE A SAFE TRIP HOME.

Appendix C

Conference Program, including supportive material provided by keynoters

CONFERENCE ON
CAREER DEVELOPMENT AND
PROGRAM ARTICULATION IN HEALTH

November 6, 7, 8, 1972

Sheraton - Biltmore Hotel
Atlanta, Georgia

Mary Elizabeth Milliken, Ed.D.
Project Director

Health Occupations Teacher Education Program
Division of Vocational Education
College of Education
University of Georgia

for

REGION IV
Bureau of Health Education Manpower
National Institutes of Health
Department of Health, Education, and Welfare

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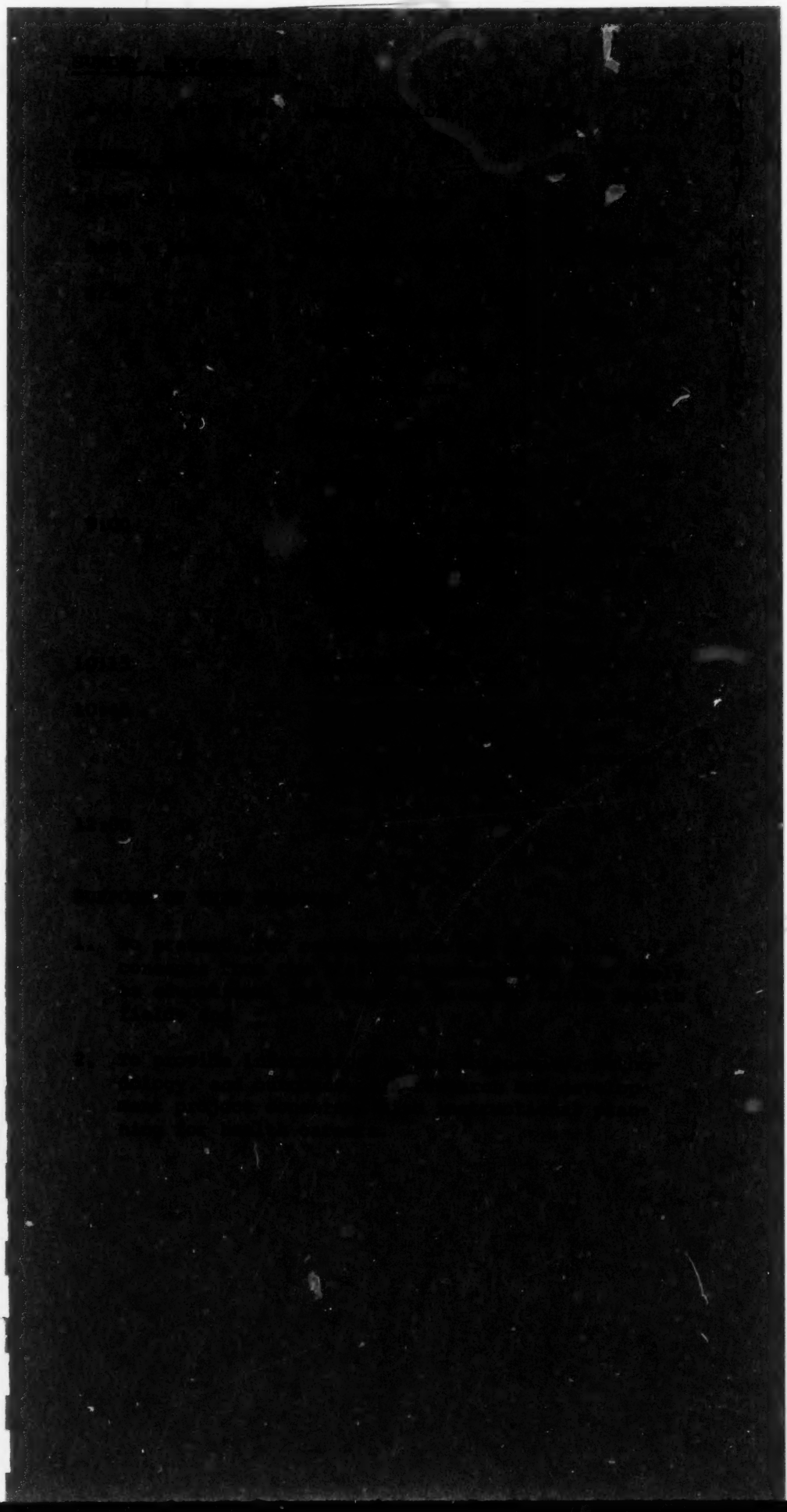

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MONDAY AFTERNOON

MONDAY, November 6

1;15 - 4:30 p.m.	GROUP SESSIONS	Rooms to be Announced
1:15	Review of AHPP Occupational Inventories. Preparation of Group Report	Occupational Areas: Dental auxiliary Medical laboratory Patient care Respiratory therapy
2:45	Refreshment Break	Lower Corridor
3:15	Reactions to AHPP Methodology Preparation of Group Report	States: Alabama, Florida, Georgia, Kentucky, Tennessee, Mississippi, North Carolina, South Carolina
4:30	Adjourn until 8:30 a.m. Tuesday	

PURPOSE OF THIS SESSION:

1. To provide an opportunity for representatives of four occupational areas in health to review the AHPP task inventories and make recommendations; and

2. To provide an opportunity for representatives of several health specialty areas to discuss needs of their states for new or revised approaches to instructional planning.

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TUESDAY MORNING

TUESDAY, November 7

8:30 - 12:00 N	GENERAL SESSION	SHERATON A
	Presiding:	Keith Johnson
	Announcements	
	Method and Procedure for Job Operation Breakdown	Thomas Freeland
9:30	How to Develop Performance Statements	Lucile Wood
10:15	Refreshment Break	Lower Corridor
10:30	GROUP SESSION	Occupational Areas
	Practice in Doing a Job Operation Breakdown	
	Practice in Specifying Differential Learning Outcomes for Entry Level, Assisting, and/or Technical Level Workers	
12:00	LUNCH	

PURPOSE OF THIS SESSION:

1. To explain and demonstrate the process of analyzing a task (skill/activity) into components, as a basis for instructional planning;

2. To demonstrate the translation of job performance requirements into instructional objectives, in order to develop instructional materials with a high level of validity for job performance requirements; and

3. To provide opportunities for participants to practice doing a task analysis according to J.O.B. procedure and stating performance objectives based on the results of the analysis.

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TUESDAY, November 7

1:15 - 4:30 p.m.	GENERAL SESSION	SHERATON A
1:15	Presiding:	Johnny Browne
	Careers in Health Services Program at the High School Level	Diane Watson
2:15	Considerations in Designing Curriculum for Career Development	AHPP Staff: Thomas Freeland Diane Watson Lucile Wood
3:00	Refreshment Break	Lower Corridor
3:15	Panel Discussion - Moderator:	Clarence Tunmer
	Members:	
	Health Professions Educator	Rhodes Haverty
	Comprehensive Health Planner	Wilson Morgan
	Nurse-educator-author	Claire Keane
	Dental auxiliary educator	Bonnie Franklin
	Assistant Administrator, State Department of Education	Delmar Miller
	Administrator - Postsecondary Institution	Dixon Hall
	Teacher - Coordinator	Grace Ward
	Secondary	Deborah Elder
	Postsecondary	Carolyn Evans
4:30	Adjourn until 8:30 a.m. Wednesday	

PURPOSE OF THIS SESSION:

1. To present information about a high school program which provides opportunities for exploring the health field;

2. To present AHPP experiences in designing curricula for educational programs in the health field; and

3. To provide an opportunity for participants to react to ideas presented from the platform and to consider alternatives for planning educational programs in health.

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WEDNESDAY MORNING

WEDNESDAY, November 8

8:30 - 12:00 N	GENERAL SESSION	SHERATON A
	Presiding:	Ray Greeson
	Announcements	
8:45	The Career Model	Lucile Wood
10:15	Refreshment Break	
10:30	Presiding:	Mary Elizabeth Milliken
	Reports - Affirmative Action Plans	States and Occupational Groups
11:45 - 12:15	Reaction Panel: Evaluation of Conference	
12:15 - 12:30	Summary and Challenge	Dr. E.C. Martin, Director Educational Improvement Council
12:30	Adjourn	

PURPOSES OF THIS SESSION:

1. To explain the Careel Model for nursing, as an example of a curriculum design which can be developed for other specialty areas within the health field;

2. To provide an opportunity for those who are planning curriculum changes as a means of resolving one or more existing problems to present an overview of intended approaches and receive consultant and participant feedback.

AN ECONOMIST LOOKS AT HEALTH TRAINING PROGRAMS

I. Some Preliminary Concepts

A. The Role of Value Systems

1. producer
2. work ethic
3. needs
4. "handicapped"
5. respect for life
6. respect for death
7. children
8. elderly

B. Social Systems - Relationship of Societal Norms to Health Services & Training

1. "Deviant" behaviors
   a. Different
      (1) retardation
      (2) "gay"
      (3) mentally ill
      (4) physically handicapped
      (5) the dying
      (6) "by passed" population
      (7) poor
   b. Defiant
      (1) draft card burners
      (2) draft file burning
      (3) "offenders" - theft, assault, etc.

C. Economic System Factors (Criteria)

1. Producers - Who Give Health Services
   a. Licensing, certification, registration
   b. Reciprocity
   c. Competence - legal but not ethical, ethical but not legal
2. Distributors in many settings
   a. private dollars
   b. third party payers (public and private)
   c. interesting case
3. Consumers - Who Receive Health Service
   a. the wealthy
   b. the poor
   c. producers
   d. children
   e. the aged
   f. everyone

D. Standards for Service

Assuming we cannot do everything for everyone, shall we emphasize

1. prevention or
2. crisis intervention

Shall we provide services

1. only full scale - what is that? Note: limit to a few
2. based upon need - as determined by whom?
3. based upon supply - access 1 mile or 1,000 miles?
4. based upon expanded supply - utilization
5. based upon "partial" service - triage and referrals

E. Standards for Training

Assuming we cannot accept every applicant, shall we emphasize -

1. Academic achievement
2. Indigenous population
3. SVIB type indicators
4. Ability to pay tuition
5. MEDIHC

Shall we provide training -

1. Only full scale
2. Based upon need of employers, population
3. Based upon talent (?) available (student or faculty)
4. Based upon utilization
5. Based upon partial programs, cooperation and referrals

II. An Allied Health Training Matrix - Some Considerations for Three Stages of Health Training Programs - Planning, Developmental and Operational (See Attachment No. 1)

III. Career Mobility

A. Some considerations

1. Coordination of Training - How to decide who offers each level of training
2. Career Development makes educational and economic sense
   a. improvement of career decision making - reality oriented
   b. current educational exposure benefits students
   c. practicing students benefit faculty
   d. may require revisions in programming to accomodate both experienced and inexperienced students - equivalency and proficiency testing
   e. may require part-time arrangements negotiated between employer, employee and educational institution
   f. may require revision of licensing and/or credentialing laws to recognize competency rather than a time interval (e.g. 11 months in training)

IV. Salary Comparisons in a Midwestern State - 1972 - for three Human Services Related Areas - Health, Education and Welfare (Unofficial - from various sources)

(See Attachment No. 2)

Attachment No. 2

Salary Range - HEALTH

	Minimum	Maximum	
Hospital Administrators			
Statewide	$15,000	Up	
Metropolitan	18,000	$30,000	
Nursing Service			
Director	14,980	19,260	
Supervisor	12,519	12,840	
Nurse - 4 year RN	9,012	9,780	(after 5 yrs.)
Nurse - 3 year RN	8,652	9,780	(after 7 yrs.)
Associate Degree RN (goes to $8,652 after 3 mo.)	8,352	9,780	(after 7 yrs.)
L.P.N.	6,360	7,500	
Ward Secretary/Clerk	5,484	6,036	
Orderlies	5,784	6,036	
Aides (all departments)	5,424	5,676	
Therapists			
Chief, P.T.	9,630	14,124	
P.T.	8,859	10,465	
P.T.A.	6,300	Up	
Chief O.T.	9,630	11,556	
O.T. (Less opportunity)	9,630	Up	
C.O.T.A.	6,300	Up	
Inhalation Therapy (O.J.T.)	6,099	6,741	
Dietition	8,760	10,980	
Laboratory			
A.S.M.T. - A.S.C.P.	8,860	10,657	
M.L.A. - C.L.A.	6,420	7,062	
Aid - Dishwasher	5,424	5,676	
Cytotech	8,650	Up	
Histotech	7,600	Up	
Medical Social Worker	8,760	10,980	
Recreation for Special Groups (A.A.)	6,300	Up	
Recreation Specialist (B.A.)	8,760	10,980	
Ambulance Driver (only 2 hospitals hire)	8,472	10,308	
Medical Secretary	6,009	Up	
Medical Electronics Technician	7,200	Up	
Radiologic Technician	7,140	7,480	
Bio Communications (M.S. - B.A.)	9,000	11,000	
Med. Photographer	7,000	8,000	
Orthotics-Prosthetics	8,000	Up	

Salary Range - EDUCATION

	Minimum	Maximum
Administrators		
Assistant Commissioner	$18,240	$22,188
Education Specialist (1 year)	9,744	13,872
Education Specialist (4 year)	15,600	20,520
Vocational Education Program Supervisors	13,344	16,872
Specialists (or M.S + 46-60 credits below doctorate	11,774	15,730
Principals		
Elementary	18,000	20,000
Junior High	20,000	Up
Senior High	22,657	25,136
Elementary and Secondary Teachers		
B.A. - Statewide	7,157	10,434
B.A. - Metropolitan	7,559	11,776
M.S. - Statewide	7,866	11,802
M.S. - Metropolitan	8,505	15,037
Teacher Aids		
School Aid I (6 steps)	3,030	4,333
School Aid II (6 steps)	3,485	4,622
School Assistant (about 10 months)	5,151	6,666

Salary Range - SOCIAL SERVICES

	Minimum	Maximum
Administrators		
Commissioner, Public Welfare	$22,500	$30,300
Assistant Commissioner, Public Welfare	20,124	25,464
Field Service Supervisors--Welfare Executive III (Departments of Public Assistance, Child Welfare Field Service and Rehabilitation)	17,208	22,632
Assistant Division Director Welfare Executive II	14,712	19,356
Welfare Executive I	10,128	13,344
Social Service Supervision. (in institution) MSW required	12,588	16,548
Welfare Field Representative	12,588	16,548
Social Work Specialist (MSW required)	10,752	14,148
Sr. Social Worker MSW or BA plus experience	9,564	12,588
Beginning Social Worker (BA level)	8,496	11,172
Eligibility Technician	5,880	7,140
Case Aide	6,864	8,760
Payment Counselor	7,752	9,420

ALLIED HEALTH TRAINING MATRIX

SOCIETAL NEEDS	PROGRAM INITIATION CRITERIA	PROCESS	SUCCESS CRITERIA	SUPPORTING SERVICES
PHASE I PLANNING Identification of Training Needs: Direct Indicators: Morbidity Mortality Unfilled jobs Unfilled needs Indirect Indicators: Poverty Minorities not in - delivery systems training programs at all levels	Identification of Priorities: Needs - most urgent Available/Expandable Resources Costs Alternative Sources of Program ← Feeder Programs ← Openings in Next Level	Identification of Settings: Service Academic Clinical Content and Sequencing Core & Unique Learnings Coordination Routes	Priority Program Timetables Community is Involved Curriculum Committees Charged Coordinator Named Initial Faculty Hired	Manpower Research and Experienc Inputs Recruitment, Tenure, Migration, Allocation Utilization & Productivity Quantity & Quality Evaluation Economies of Scale Compliments & Substitutes Forecasting Technological Change
PHASE II DEVELOPMENT Update Information Improve Instruments for Monitoring Indicators	Achieve full or partial coordination at all levels, across disciplines and institutions including technical & liberal arts options	Identify or Design Evaluation Tools Field Test Content and Methods Establish "Self Destruct" criteria and mechanism	Advisory Committee's Functioning Coordination & Communication routes open Curriculum Designs for N Programs	Research & Experience Multilevel Curriculum Design Heterogeneous Student Populatio Evaluation of Alternatives Evaluation of Utilization (service delivery) Facilty Design Counseling and Guidance
PHASE III OPERATION Semi-annual Input: Needs Trends and Indicators Fed into Planning	Optimize Training Resource Allocation Modify Coordination Procedures	Monitor Service Delivery in Clinic Settings Present Modified Content and Materials Maintain Evaluation Tools Maintain Mechanism for Rewarding Content and Materials	Communication & Cooperation between Health Training System & Health Delivery Systems and Community (financial & leval) Indicators Show Improvement	Research & Experience feeds int Resource Allocation Governmental Policy National Health Insurance Facility Contruction Policy Training Support CONTINUING EDUCATION Developing to Support All Levels

M. Barbara Killen
11/72

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ALLIED HEALTH PROFESSIONS PROJECT

UNIT I: HISTORICAL REVIEW

What

Why

Where

Philosophy The basic philosophy of the project may be summarized as follows: The aim is to develop instructional material which will enable the student, after a successful period of study, to perform a skill or series of skills. The correct performance of the task/job/activity will enable the student to have sufficient marketable skills for legitimate remunerative employment. The basic strategy for the development of appropriate instructional materials is to use the job as a benchmark for deciding what skills/tasks will be taught. The criterion of acceptable performance is dependent on the standards of the local agency; however, the Allied Health Professions Project has and will continue to suggest minimum performance standards.

Goals

1. To develop modern and effective curricular and instructional materials appropriate for training personnel up to and including the Associate of Arts degree.

2. To provide for continuous updating of these materials, and for their nationwide distribution.

Objectives

1. To develop curricula in health-related fields using modern educational methods.

2. To develop instructional materials on a modular basis.

3. To investigate the concept of core curricula.

4. To develop an Allied Health Occupations career lattice.

5. To provide and distribute, by public or private means, the instructional materials that are developed.

Project Methodology With the advice and guidance of a National Technical Advisory Committee and utilizing expert consultants as needed, staff will complete for each occupation selected:

1. Identification and listing of all possible tasks within the functional area described.

2. Verification of tasks--a process which might include a survey or field test to determine appropriateness of the task list to the occupational category under consideration.

3. Determination of the processes involved in performance of the task, and determination of the knowledges and skills required for satisfactory accomplishment of each task.

4. Development of behavioral objectives (performance goals).

5. Development of curriculum including consideration of the career ladder concept, continuing education, and attainment of degree objectives and transferability of credits earned.

6. Development of innovative instructional materials and instructor manuals in modular form leading eventually to core curricula and exemplary curricula for each occupational category.

7. Testing of instructional materials preceded by in-service teacher education.

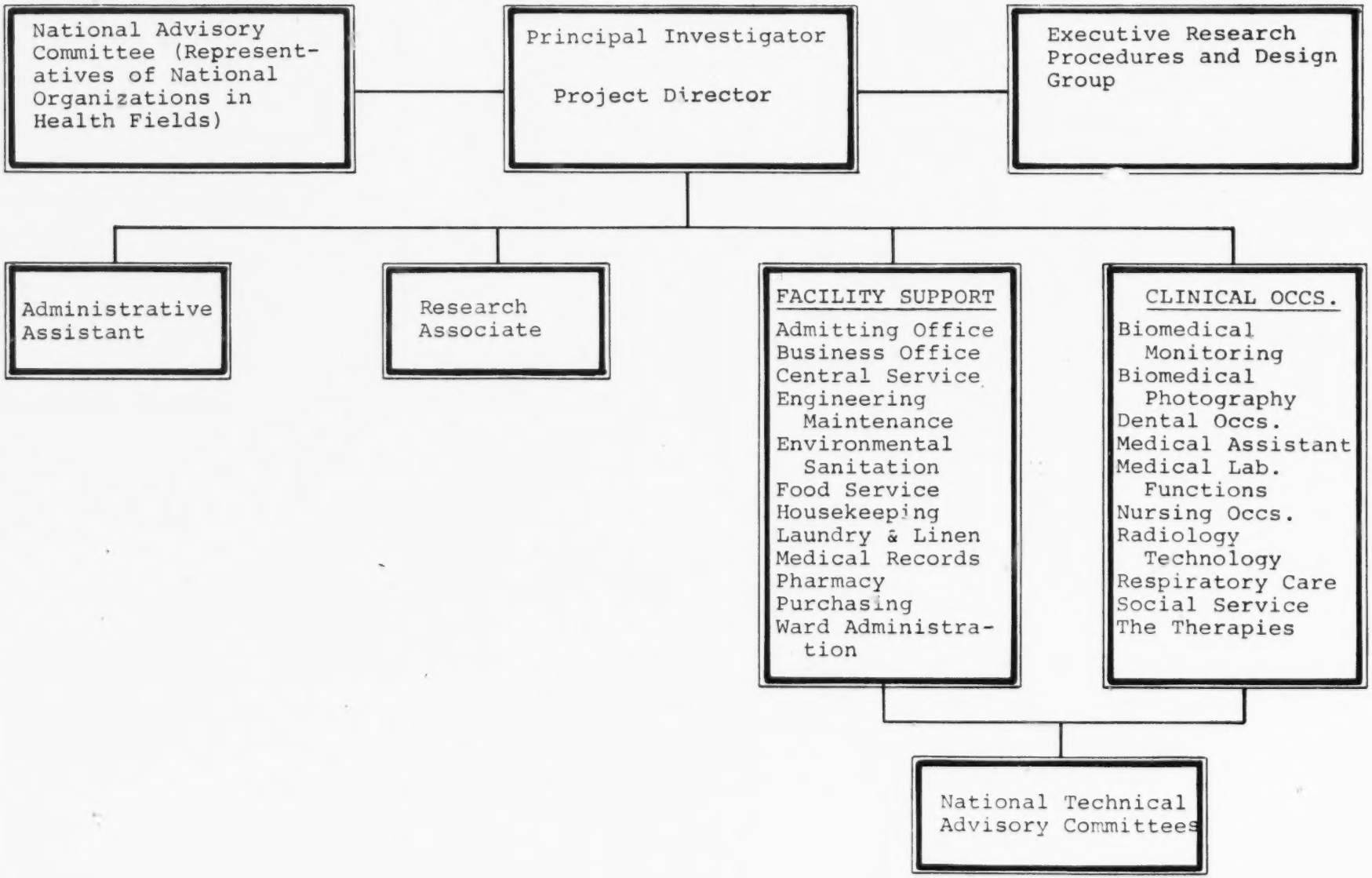
8. Evaluation of student performance by measuring attainment of behavioral objectives.

9. Production of instructional materials.

10. Distribution of materials.

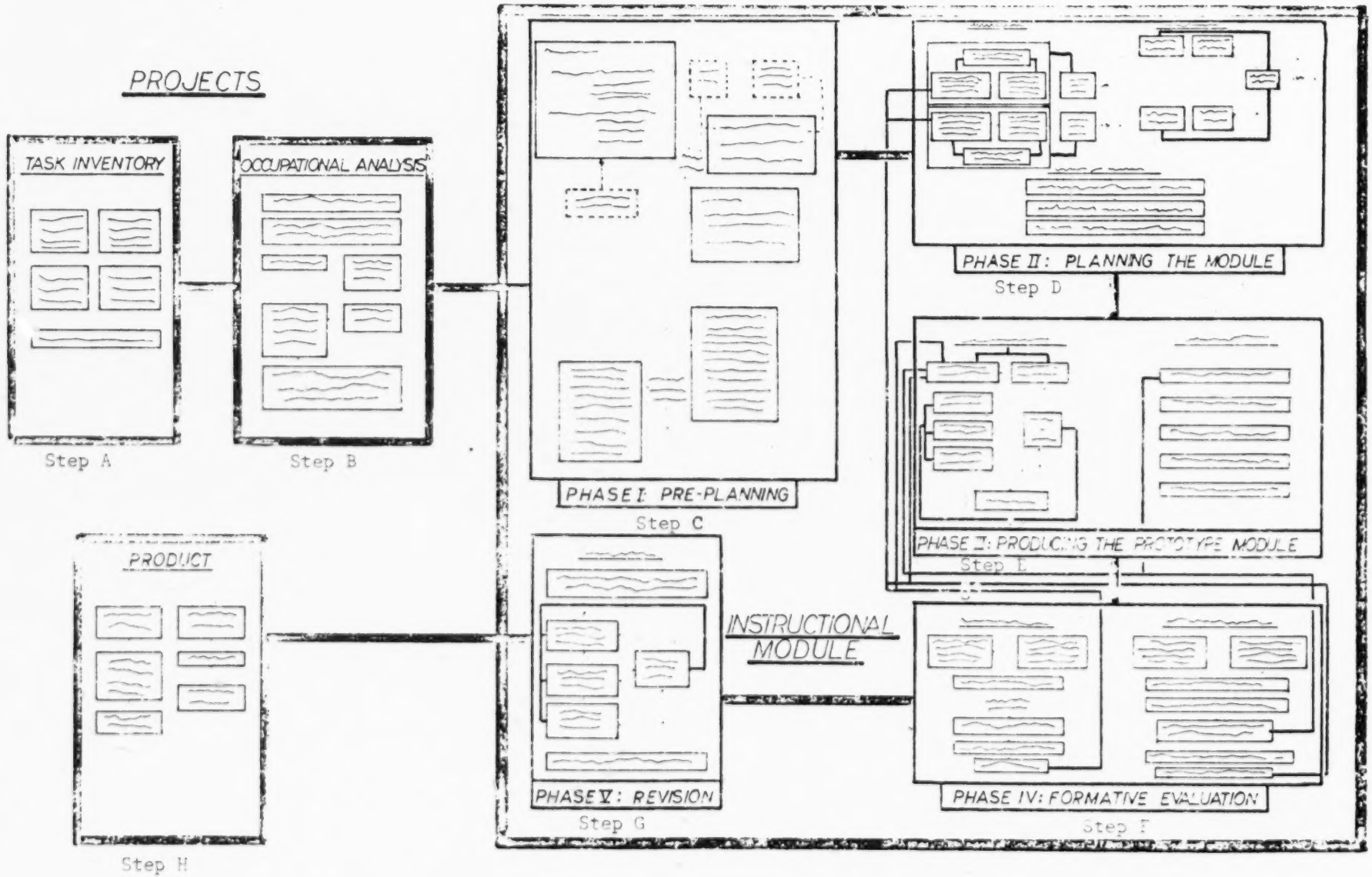
THE ALLIED HEALTH PROFESSIONS PROJECT

(ORGANIZATIONAL CHART)



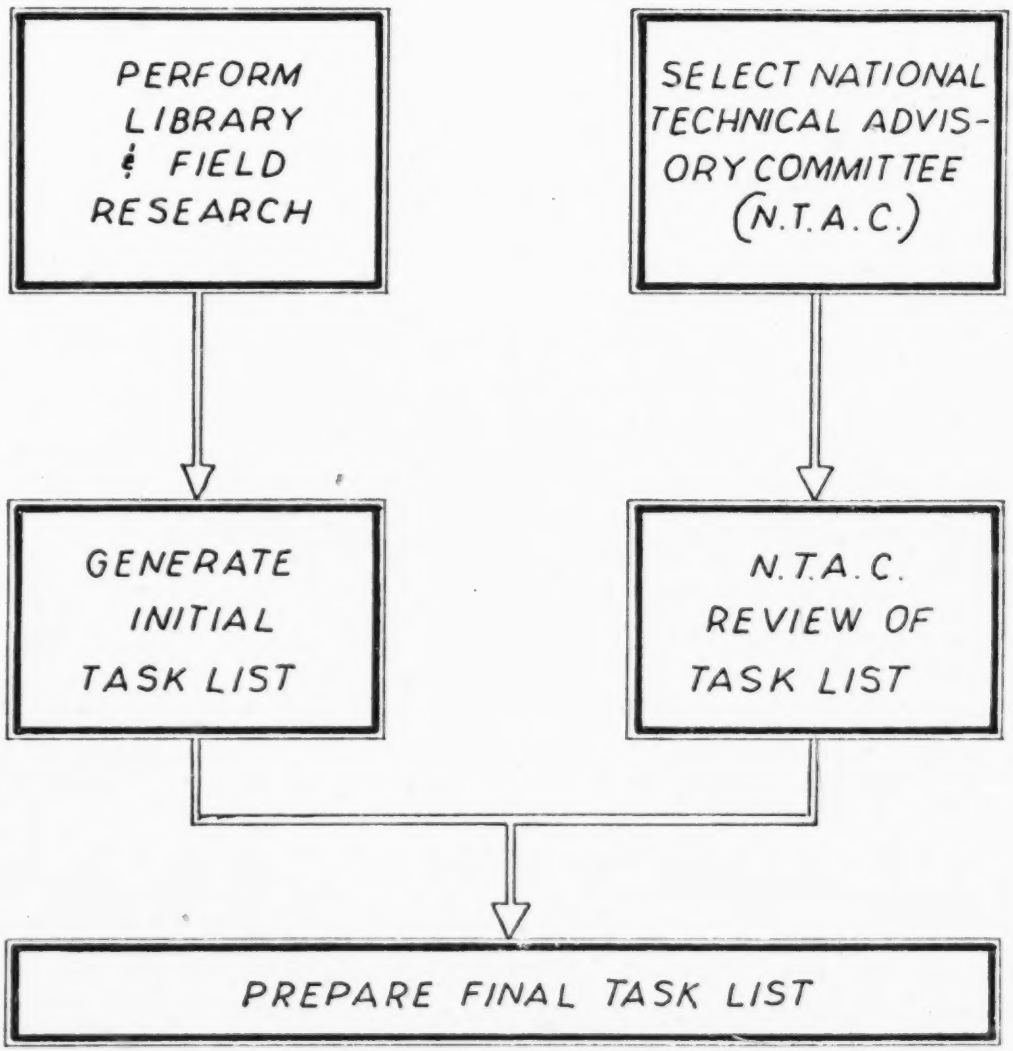
AHPP
11/71

AIIPP: DEVELOPMENTAL SYSTEM



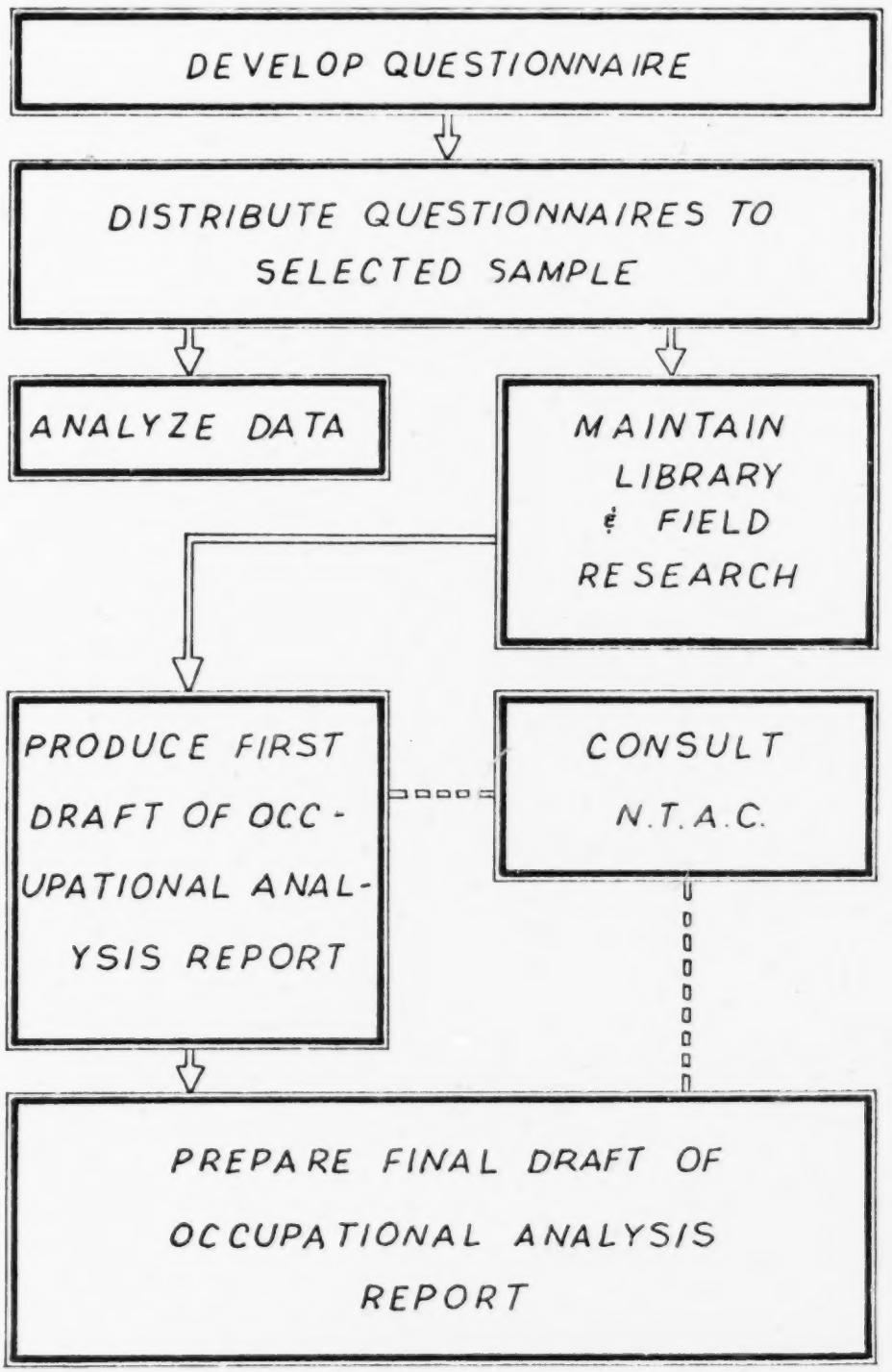
Step A: AHPP DEVELOPMENTAL SYSTEM

TASK INVENTORY

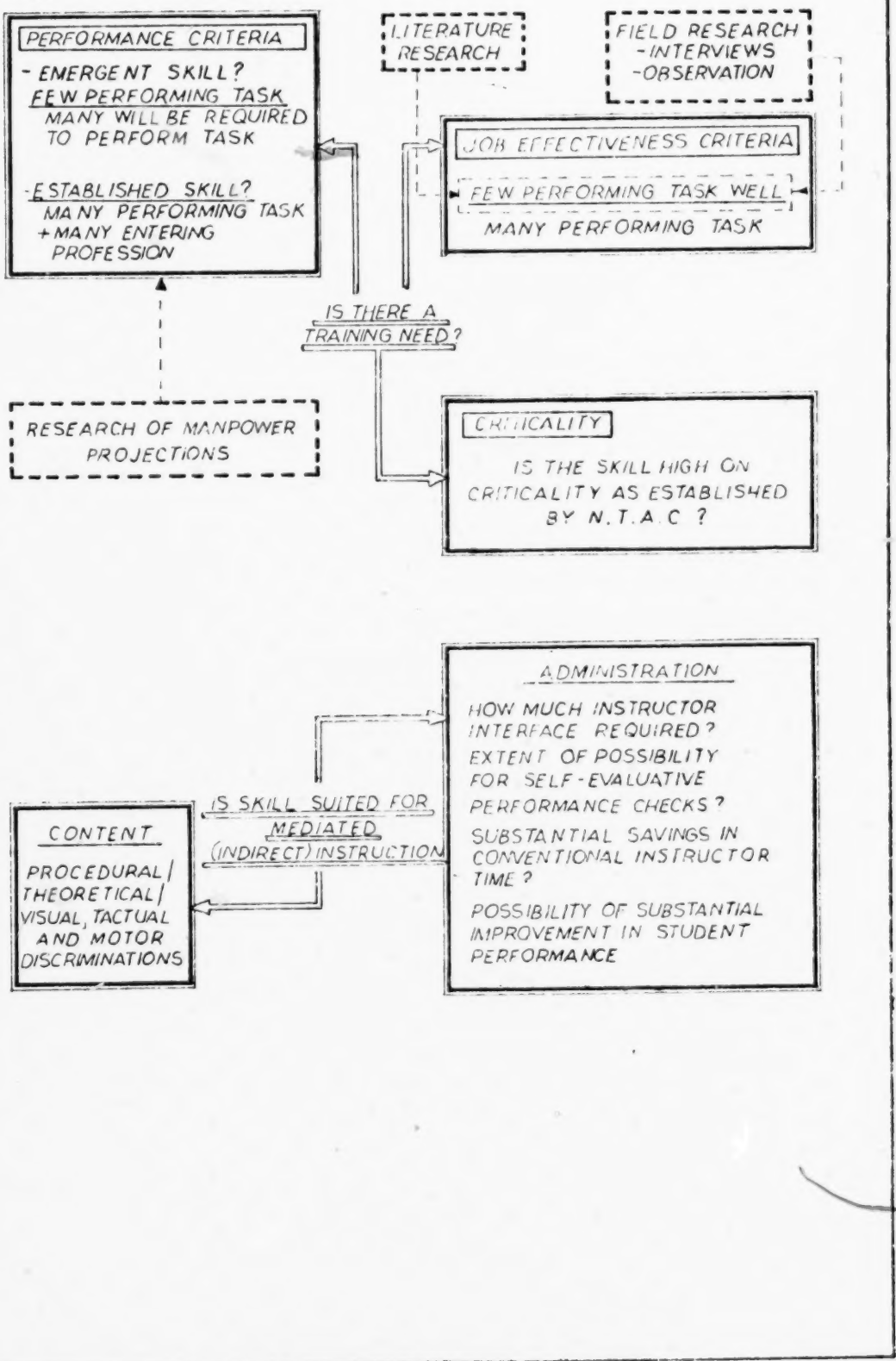

PERFORM LIBRARY & FIELD RESEARCH
SELECT NATIONAL TECHNICAL ADVISORY COMMITTEE (N.T.A.C.)
GENERATE INITIAL TASK LIST
N.T.A.C. REVIEW OF TASK LIST
PREPARE FINAL TASK LIST

Step B: AHPP DEVELOPMENTAL SYSTEM

OCCUPATIONAL ANALYSIS

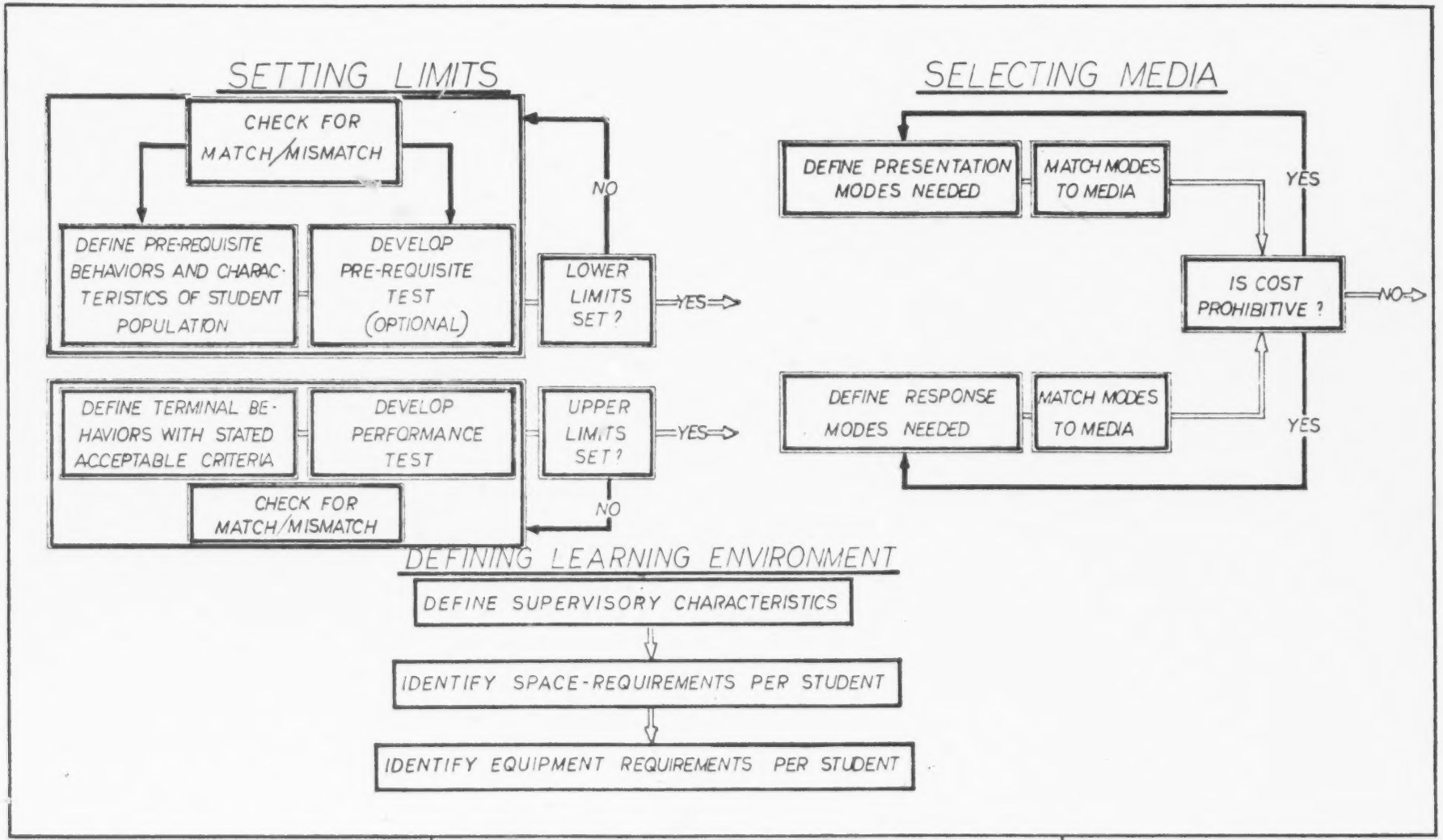

DEVELOP QUESTIONNAIRE
DISTRIBUTE QUESTIONNAIRES TO SELECTED SAMPLE
ANALYZE DATA
MAINTAIN LIBRARY & FIELD RESEARCH
PRODUCE FIRST DRAFT OF OCC-UPATIONAL ANAL-YSIS REPORT
CONSULT N.T.A.C.
PREPARE FINAL DRAFT OF OCCUPATIONAL ANALYSIS REPORT

Step C: AHPP DEVELOPMENTAL SYSTEM



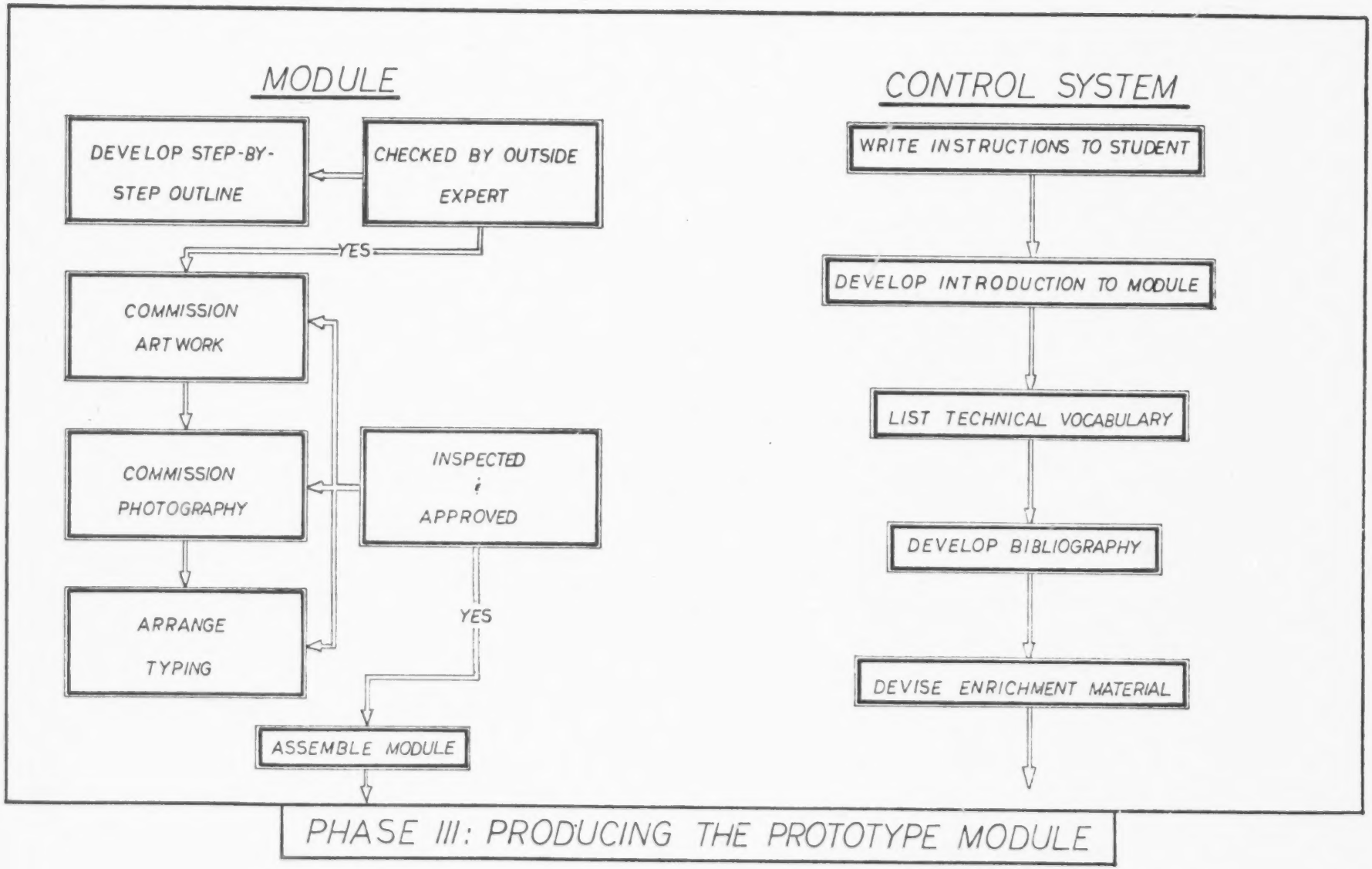
PHASE I: PRE-PLANNING

Step D: AHPP DEVELOPMENTAL SYSTEM

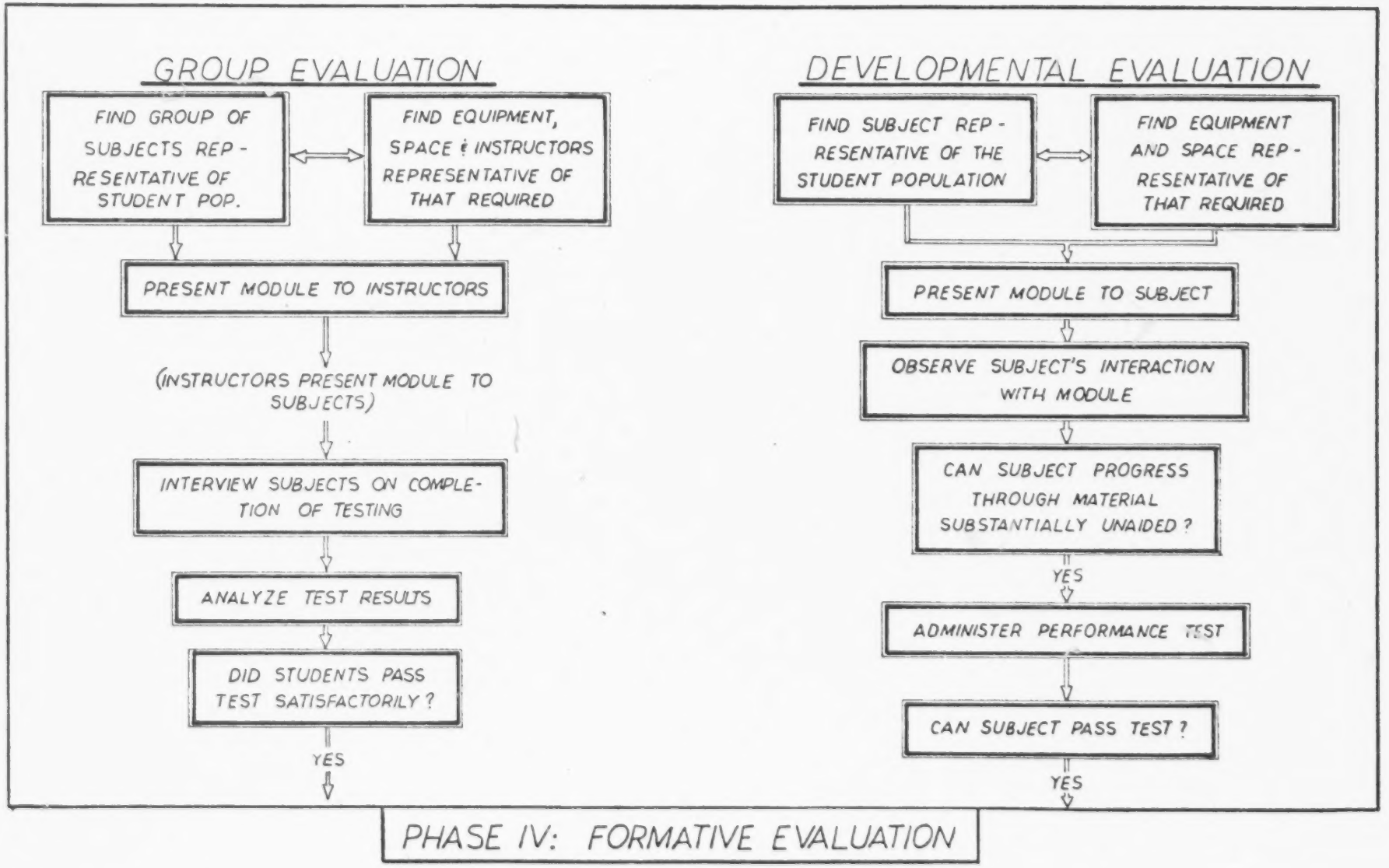


PHASE II: PLANNING THE MODULE

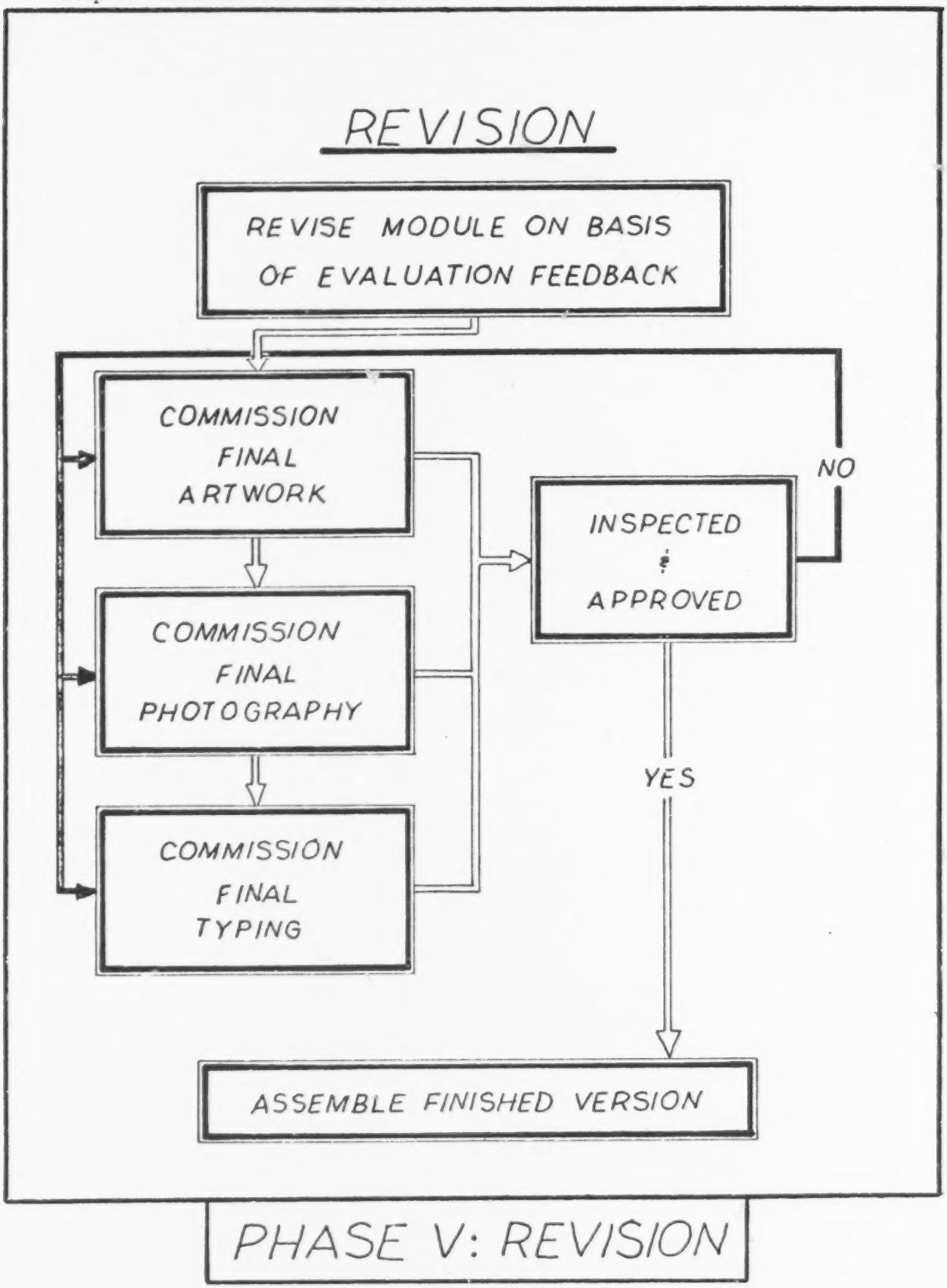
Step E: AHPP DEVELOPMENTAL SYSTEM



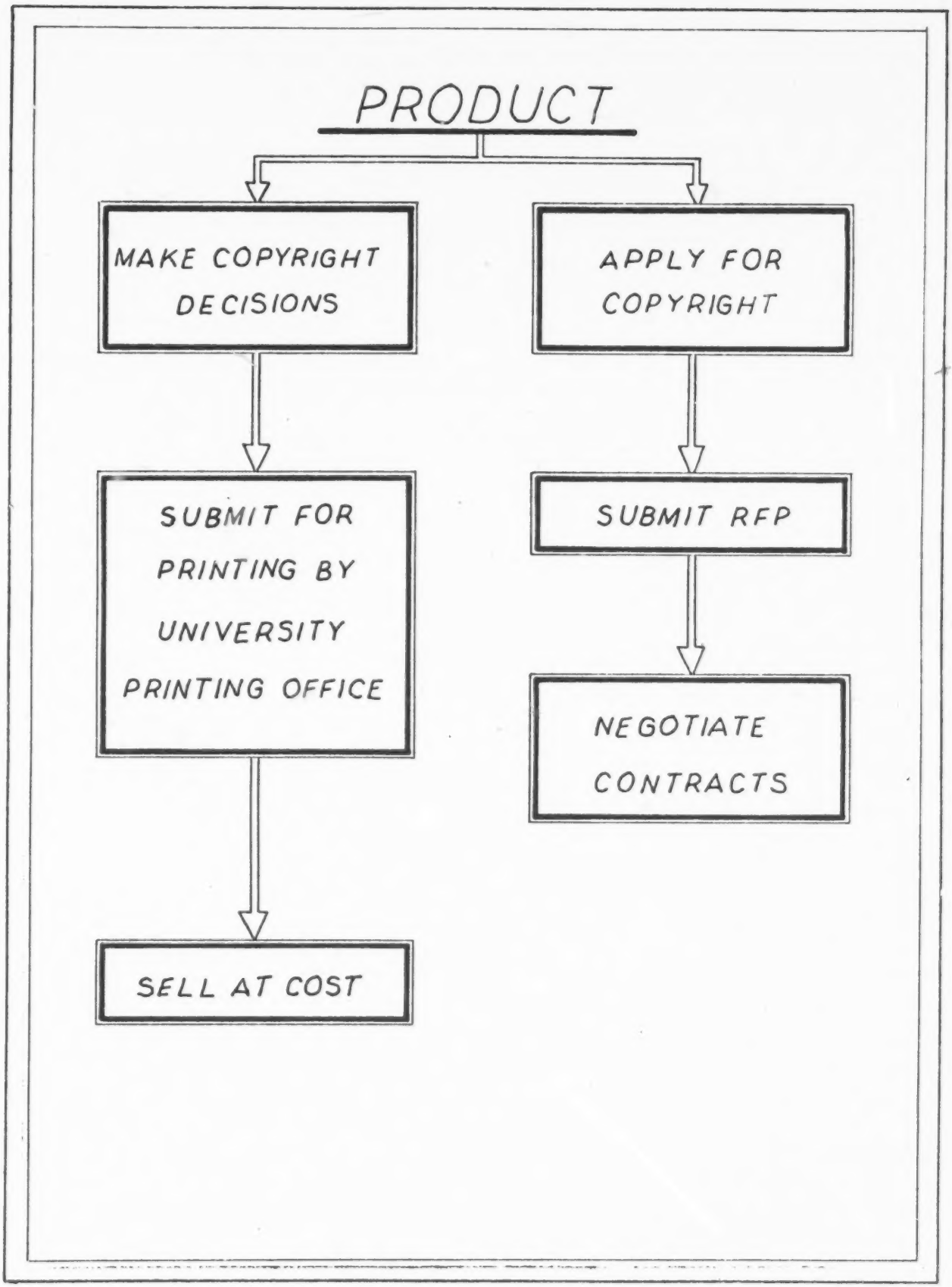
Step F: AHPP DEVELOPMENTAL SYSTEM


GROUP EVALUATION
FIND GROUP OF SUBJECTS REP-RESENTATIVE OF STUDENT POP.
FIND EQUIPMENT, SPACE & INSTRUCTORS REPRESENTATIVE OF THAT REQUIRED
PRESENT MODULE TO INSTRUCTORS
(INSTRUCTORS PRESENT MODULE TO SUBJECTS)
INTERVIEW SUBJECTS ON COMPLE-TION OF TESTING
ANALYZE TEST RESULTS
DID STUDENTS PASS TEST SATISFACTORILY?
YES
DEVELOPMENTAL EVALUATION
FIND SUBJECT REP-RESENTATIVE OF THE STUDENT POPULATION
FIND EQUIPMENT AND SPACE REP-RESENTATIVE OF THAT REQUIRED
PRESENT MODULE TO SUBJECT
OBSERVE SUBJECT'S INTERACTION WITH MODULE
CAN SUBJECT PROGRESS THROUGH MATERIAL SUBSTANTIALLY UNAIDED?
YES
ADMINISTER PERFORMANCE TEST
CAN SUBJECT PASS TEST?
YES
PHASE IV: FORMATIVE EVALUATION

Step G: AHPP DEVELOPMENTAL SYSTEM



Step H: AHPP DEVELOPMENTAL SYSTEM



How To Do A Job Operation Breakdown (JOB)
(Task Analysis) Thomas Freeland

Objective: At the end of this session you will be able correctly to prepare at least one job breakdown of a skill you select in your area of interest, e.g., clinical laboratory, etc.

1. Specify the skill (activity or task) to be learned.

2. Subdivide the skill into major steps to be learned.

3. Support the practical content with related theory which will clarify the major steps, e.g., factors which make or break the successful attainment of the skill; safety precautions; points for making the step easier to do (special timing, special handling or positioning, special sequence of action); related biological concepts or principles of microbiology, where applicable and human relations skills needed for successful completion of the activity; pertinent ethical or legal concepts.

GROUP ACTIVITY: PRACTICE IN J.O.B.

STATEMENT OF THE TASK: _____

_____

_____

_____

2. OBJECT COMPONENT 4. ACTION COMPONENT 6. INFORMATION COMPONENT

3. Can the objects required to do the task be identified from the task statement" YES - Go to action component; NO - Rewrite the task statement.

5. Is there agreement between the writer and an "expert" on what the performer will do, according to what the task statement says? YES - Go to information component; NO - Rewrite the task statement.

7. Classify each item listed in the information column as follows:

Directly related information	++++
Indirectly related information	+++
Generally related information	++
Unrelated information	+

8. Participate in a group discussion on the implications of these classifications for instructional planning.

lbt

U.C.L.A. DIVISION OF VOCATIONAL EDUCATION
CLINICAL INSTRUCTOR TRAINING PROGRAM
JOB BREAK-DOWN SHEET

Instructor: _____ Trainee: _____ Job: Handwashing

IMPORTANT STEPS IN THE OPERATION: A logical segment of the operation when something happens to ADVANCE the work	KEY POINTS: Anything in a step that might Make or break the job Injure the worker Make the work easier, i.e., "knack," "trick," special timing, bit of special information
1. Approach sink	Stand comfortably, in good body alignment Stand away from sink Avoid wetting uniform with water
2. Turn on water	Water runs continuously throughout procedure Hand operated, foot pedal, elbow lever
3. Adjust water temperature	Warm water--better suds, removes fewer skin oils Very hot or cold water--dry skin
4. Wet hands with water	Hands downward Avoid touching sides of sink Water drains from wrist to fingertips
5. Apply soap (detergent)	2-4cc liquid soap Bar soap-harbors germs, must rinse off if used before replacing in soap dish
6. Wash hands	Use friction, rotary action 30 seconds (strokes) Wash palm-10 sec, back of hand 10 sec, interdigital spaces 10 sec
7. Rinse	Water must flow from wrist to fingertips
8. Moisten wrists and forearms	About 4cc liquid soap Wash first one wrist and forearm, then the other 15 sec. each
9. Rinse arms and hands	Water drains off fingertips
10. Repeat handwashing	Steps 5 through 9
11. Inspect knuckles	Excess dirt and germs collect on knuckles
12. Clean fingernails	Clean at beginning of tour and PRN Use orange stick, file, etc. Discard after cleansing

SEPARATING CLINICAL SPECIMENS

U.C.L.A. DIVISION OF VOCATIONAL EDUCATION
CLINICAL INSTRUCTOR TRAINING PROGRAM
JOB BREAK-DOWN SHEET

Instructor:_____ Trainee:_____ Job:_____

IMPORTANT STEPS IN THE OPERATION: A logical segment of the operation when something happens to ADVANCE the work	KEY POINTS: Anything in a step that might Make or break the job Injure the worker Make the work easier, i.e., "knack," "trick," special timing, bit of special information
CHECKING THE CENTRIFUGE	
1. Open the centrifuge cover	1. ---
2. Remove any tubes that are in the centrifuge cups or shields.	2. ---
3. Check that opposite each cup in the rotating head there is another of equal weight	3. If a cup is missing, notify the instructor
4. Remove two opposing cups from the entrifuge head	4. See illustration
5. Examine each for debris such as broken glass	5. ---
6. If a cup is not clean, invert and tap against a hard surface.	6. Rinsing with tap water helps to remove debris such as dried blood.
7. Remove the rubber cushion from the bottom of each cup	7. Tapping as in Step 6 or using a forceps will aid in removing it (see illustration)
8. If the cushion is in good condition, put it back; if it is brittle or cracked, replace with a new one	8. ---
9. Place the cups on a surface near the centrifuge.	9. ---

OBJECTIVE FORMULATION:

OVERVIEW

Before launching any educational project, whether it be development of instructional material or classroom teaching, it is imperative that the objectives be stated in measurable terms. These measurable objectives will help:

1. Determine the various courses of action that are to be taken in order to attain the objectives.

2. Ask the project designers to identify what conditions are necessary to attain the stated objectives.

3. Evaluate the outcomes.

This booklet is designed so that when you complete it you will be able to:

1. Discriminate between measurable objectives and nonmeasurable objectives.

2. Transform the nonmeasurable objectives into measurable ones.

3. Analyze objectives into components and identify the components that are obligatory and/or optional.

4. Formulate measurable objectives for given subject matter.

The purpose of this booklet, therefore, is to impart the skill of objective formulation. The various exercises are designed for the purpose of internalization. Work with these actively and learning will take place. This programmed unit is adapted from Curriculum Development: A Process by N.R. Machiraju, G.B. Krishnamurty, and Claudia Powers, copyright 1972, Educational Technology Conference, New York, 1972, and is used with the authors' permission.

WHAT IS A PERMORMANCE OBJECTIVE?

An objective is a measurable form of statement with one or more of the following explicitly discernible components:

A. Action: This is the form of action that must be carried out during the operation of the/a project.
(Example: Shall be able to identify parts of the digestive system.)

B. Conditions given: The materials and personnel that are needed to bring about the action specified.
(Example: Given a model of the human body.)

C. Minimum acceptable performance: This is stated in terms of the time duration or accuracy desired in the results of the contemplated action.
(Example: Wash hands properly in 2 minutes.)

The following table shows the combinations of the components that are admissible as objectives and the combinations that are not admissible as performance objectives.

COMBINATIONS OF COMPONENTS OF PERFORMANCE OBJECTIVES

ACTION	CONDITIONS GIVEN	MINIMUM ACCEPTABLE PERFORMANCE	IS IT AN OBJECTIVE?
X	X	X	YES
X	X	O	YES
X	O	O	YES
O	O	O	NO
O	X	O	NO
O	X	X	NO
X	O	X	YES

The " X" mark indicates the presence of the component.
The " O" mark indicates the absence of the component.

The trainee will be able to compute the State Sales Tax on a specified amount of money.

ACTION	CONDITIONS TO BE GIVEN	MINIMUM ACCEPTABLE PERFORMANCE

The member of the target group shall be able to state conditions under which the Salmonella organisms are harbored.

ACTION	CONDITIONS TO BE GIVEN	MINIMUM ACCEPTABLE PERFORMANCE

Following example gives an objective and a breakdown of its components. Analyze the components of objectives given in the exercises. This will further facilitate in identfying components of objectives.

Example: Given the amount of "taper per foot," the trainee must compute with no error the taper per inch. (Take 1/12 of the "taper per foot" value.)

ACTION	CONDITIONS TO BE GIVEN	MINIMUM ACCEPTABLE PERFORMANCE
Compute the taper per inch.	Given the amount of taper per foot.	Compute with no error.

Classify by placing a check mark in the appropriate column.

LIST OF ACTION WORDS	MEASURABLE	NOT EASILY MEASURABLE
To enrich		
To define		
To understand		
To reduce		
To state		
To know		
To recite		
To believe		
To enjoy		
To appreciate		
To identify		
To educate		

It can be said that for developing a measurable objective, only measurable action words should be used. A non-measurable action word makes the objective non-measurable.

Can an objective such as "to know the facts about venereal disease" be considered as a measurable objective? yes/no _____.

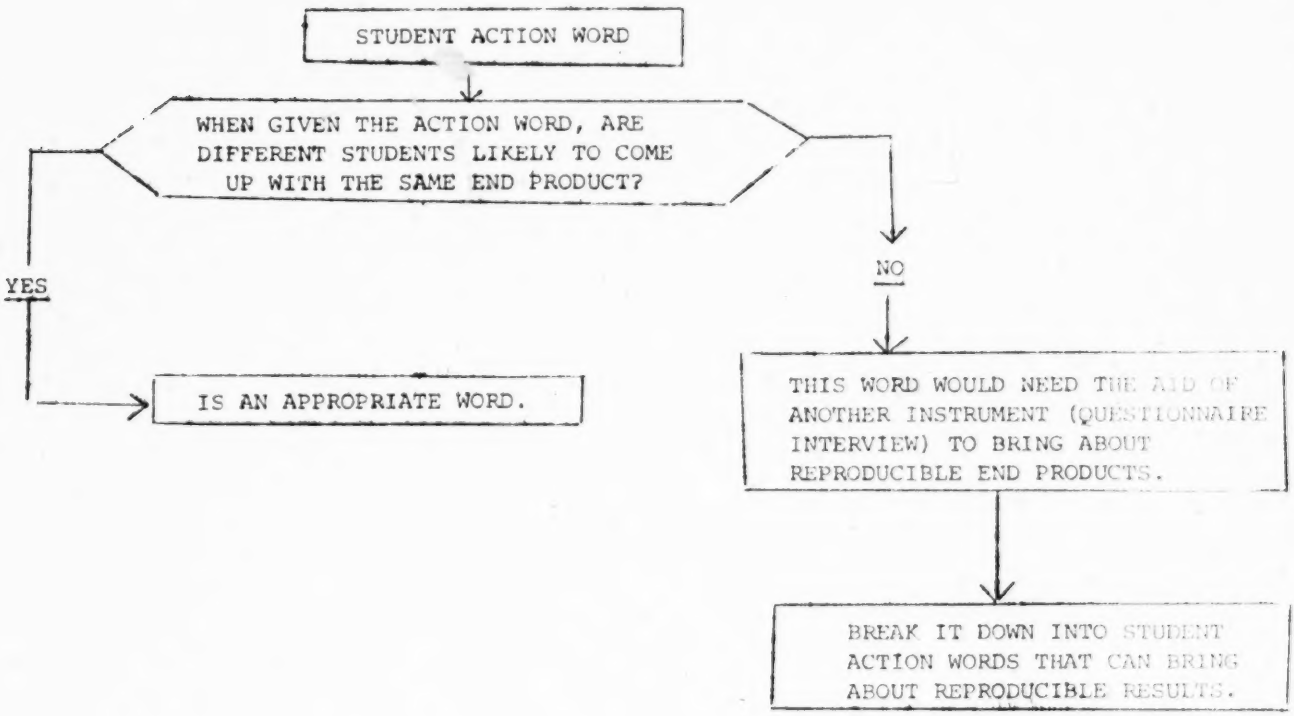
Can an objective such as "to educate the members of the target group about venereal diseases" be considered as a measurable objective? yes/no _____.

Can an objective such as "to enable the members of the target group to identify symptoms of syphilis" be considered as a measurable objective? yes/no _____.

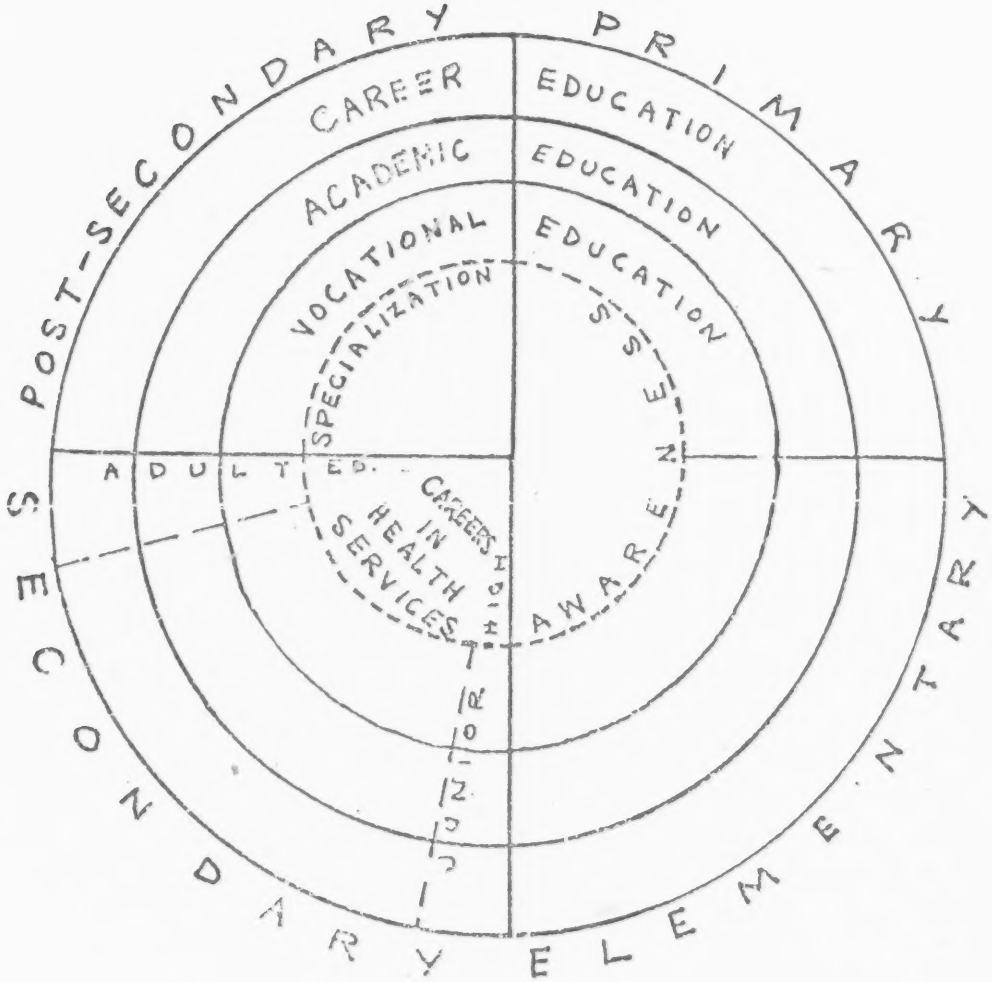
Answers: no, no, yes

One of the objectives of this booklet is to enable you to discriminate between measurable objectives and non-measurable objectives. The Action component of the objective has to be "measurable" to make an objective a measurable one. A chart for identifying measurable actions is given below. There is a list of actions (including measurable as well as non-measurable) given on the next page. You are required to classify these actions into measurable and non-measurable on the basis of the Chart.

CHART FOR IDENTIFYING MEASURABLE ACTION WORDS


STUDENT ACTION WORD
WHEN GIVEN THE ACTION WORD, ARE DIFFERENT STUDENTS LIKELY TO COME UP WITH THE SAME END PRODUCT?
YES
IS AN APPROPRIATE WORD.
NO
THIS WORD WOULD NEED THE AID OF ANOTHER INSTRUMENT (QUESTIONNAIRE INTERVIEW) TO BRING ABOUT REPRODUCIBLE END PRODUCTS.
BREAK IT DOWN INTO STUDENT ACTION WORDS THAT CAN BRING ABOUT REPRODUCIBLE RESULTS.

THE TOTAL CURRICULUM



CAREERS IN HEALTH SERVICES PROGRAMS IN CALIFORNIA 1972-1973

1. Chico Unified, Chico, California
   (3 local high schools)
2. Clovis Unified, Clovis California
3. Coachella Valley Joint Union
   Coachella, California
4. Corona-Norco Unified, Corona, California
5. Fresno City Unified, Fresno, California
6. Grossmont Union High School District
   La Mesa, California
7. Imperial Valley Unified, El Centro, California
8. Jefferson Union, Daly City, California
9. Kern Joint Union, Bakersfield, California
10. Long Beach Unified, Long Beach, California
11. Los Angeles Unified, Los Angeles, California
12. New Haven Unified, Union City, California
13. Rialto Unified, Rialto, California
14. San Mateo Union, San Mateo, California

Considerations in Designing Curriculum

for Career Development: Basic Sciences

GIVEN, that the

1. Career ladder illustrates -

   Entry level jobs require many skills and some knowledge;

   Higher level jobs require additional knowledge, but few additional skills beyond those of lower level jobs;

2. Job Operation Breakdown (J.O.B.) shows that related knowledge (direct and indirect) is needed, but little general knowledge (nice to know) is required;

AND

3. The traditional basic science courses are subject - centered: anatomy, physiology, biology for science majors AND nonscience majors, with little or no consideration for different student goals.

THEN,

1. How might a course be set up for health programs?

   - Other college catalogs

   - Ask practitioner

   - Judgment of related faculty

2. What is an alternate method?

   - Task analysis approach

     a. List tasks

     b. Describe skills and knowledge

     c. Draw out basic science concepts

What are the implications of this method for Allied Health curriculum design?

UNIT V: SPECIAL CONSIDERATIONS

Objective: You will be able to discuss advantages/disadvantages of core curriculum, career sequence (ladder/lattice) and integration of basic science content versus basic science core with the program panel.

Core Curriculum

"Core has many meanings, including (1) that part of the curriculum which is concerned with the types of experiences thought to be essential for the development of specific behavior competencies considered necessary for effective action; (2) a number of logically organized subjects or fields of knowledge which may be interrelated; (3) common problems or units of work; and (4) ideas providing a design or structure for studying a particular subject.

The concept of core curriculum was first expressed about 35 years ago. The specific advantages of core curriculum are thought to include: (1) enhancing teaching efficiency and economy by structuring a foundation of courses which can be applied to a wide spectrum of careers; (2) providing uncommitted students with an educational experience which will assist in their choice of career and be applicable to that career; (3) allowing the student to synthesize and correlate learning experiences; (4) permitting greater program flexibility and adaptability; and (5) providing for greater interaction among allied health students.

Because of the numerous definitions and purposes of core curriculum, because the allied health occupations encompass a broad spectrum of knowledges and tasks, and because the project staff believes that "core" should be based on the performance of common tasks, the various levels of core have been defined by AHPP. Using the performance of a specific task as a basis, the following categories are delineated:

1. Tasks which are performed by all levels and types of allied health workers. These tasks form an allied health core, e.g., Handwashing for Medical Asepsis.

2. Tasks which are performed by all levels of personnel within a specific occupational field. These tasks comprise a core which is specific to an occupational field, e.g., bedmaking.

3. Tasks which are performed by a specific category of personnel within a specific occupational field, i.e., dependent on position title or certification. These tasks comprise a core which is specific to one level of personnel within an occupational category, e.g., RN -- give IV medication.

4. Tasks which are thought to be job-specific, that is, the performance of these tasks is related to the environment in which the task is performed; therefore, it may be unique to a specific worker, e.g., Group Therapy Counseling -- for Psychiatric RNs.

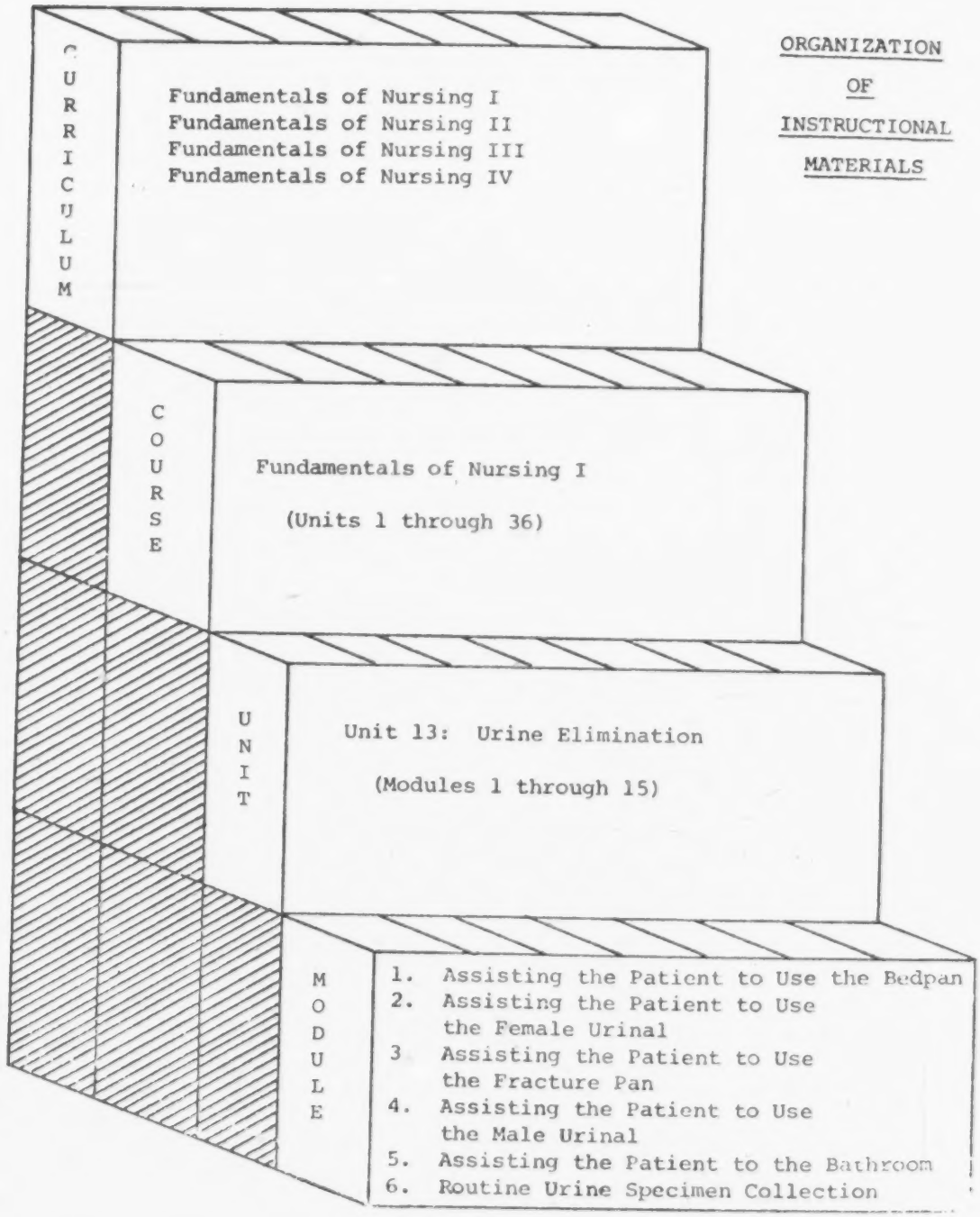
The Allied Health Professions Project is developing core curricula based on the performance of common tasks as delineated in the above categories.

AHPP Definitions of Terms

Behavioral Objective:	The capabilities which the student should acquire as a result of the learning experience.
Career Lattice:	Provision of opportunity for the entry-level individual and/or trained worker to continue his education to a more advanced level in an occupational field.
Curriculum:	The sum total of learning experiences for which the school has responsibility.
Course:	One or more related units of instruction.
Instructional Unit:	Instructional materials which consist of one or more related modules.
Module:	A self-contained instructional segment.
Entry-Stage:	The point at which a novice student undergoes preparation for gainful employment at the first career stage which provides a foundation for advancement in an occupation.
General Knowledge:	Information that develops "pride in the profession" and other professional values.
Job Operation Breakdown:	A study to determine the steps a worker must do and the key points of knowledge he must know in order to perform a given task.
Key Point:	Knowledge which is required to perform a step. A key point may be one of three types: (1) anything that assures success or causes failure; (2) physical dangers; (3) any "trick" which may make the work easier.
Learning:	That which occurs when a person changes his own behavior. Behavioral changes may be the acquiring or discarding of skills, knowledges, and/or attitudes.
Occupational Analysis:	A study to determine the tasks currently being performed by workers in a given occupational area.
Programmed Instruction:	A systematized auto-tutorial self-paced instructional method.
Programmed Learning:	A series of sequential learning experiences which results in a change in behavior.
Stage:	A major element of an occupational curriculum which permits, at completion, full employment as a practitioner with demonstrable performance capabilities (skills, knowledge), i.e., Nursing Occupation, Stage II - Basic Nurse Practitioner.

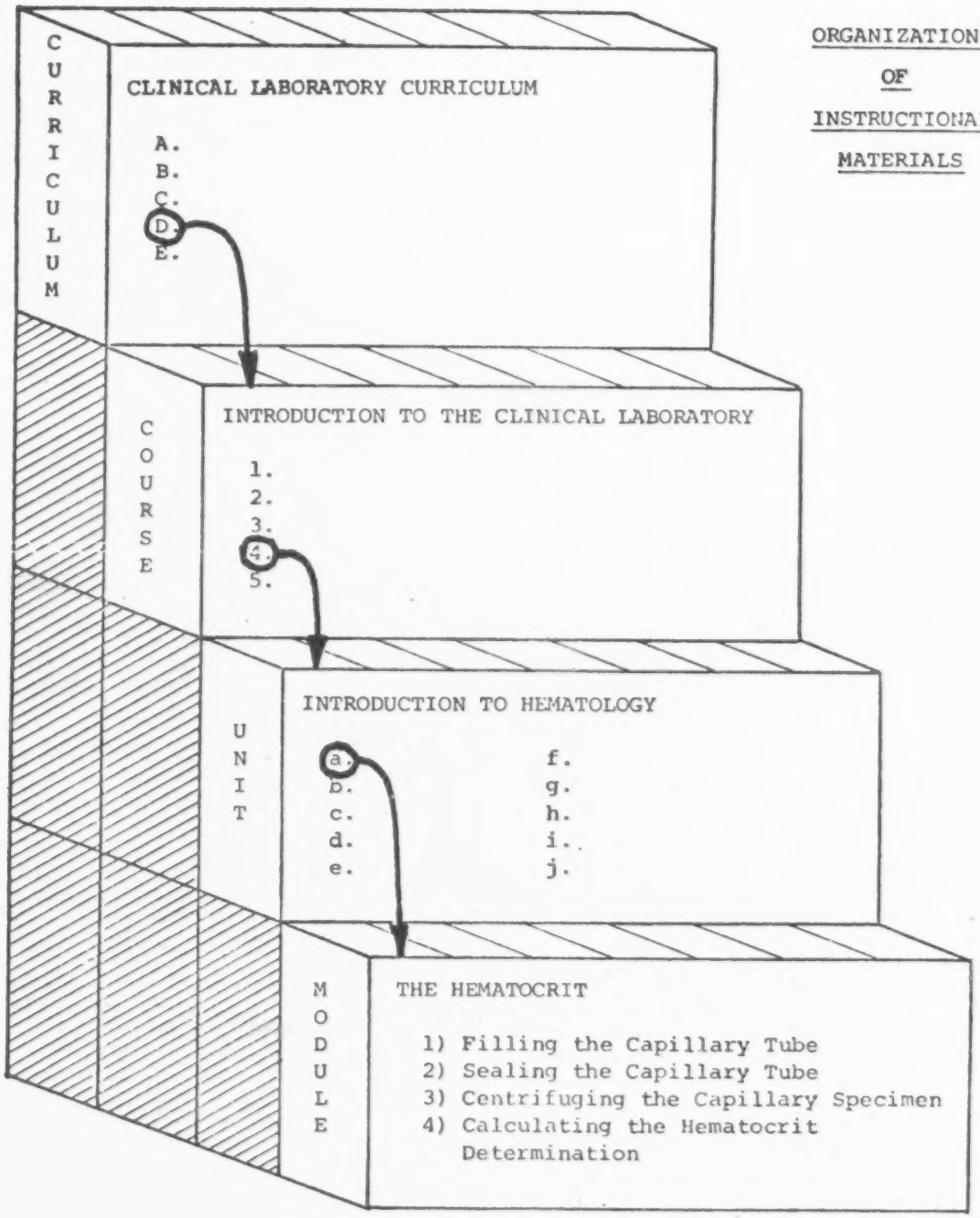
Step:	A logical segment of a task, when something happens to advance the work.
Task:	A series of steps that make up a complete unit of work.
Teaching:	Assisting learners to change their own behavior, and creating conditions which are conducive to behavioral changes.

NURSING OCCUPATIONS


CURRICULUM
Fundamentals of Nursing I
Fundamentals of Nursing II
Fundamentals of Nursing III
Fundamentals of Nursing IV
COURSE
Fundamentals of Nursing I
(Units 1 through 36)
UNIT
Unit 13: Urine Elimination
(Modules 1 through 15)
MODULE
1. Assisting the Patient to Use the Bedpan
2. Assisting the Patient to Use the Female Urinal
3 Assisting the Patient to Use the Fracture Pan
4. Assisting the Patient to Use the Male Urinal
5. Assisting the Patient to the Bathroom
6. Routine Urine Specimen Collection

ORGANIZATION OF INSTRUCTIONAL MATERIALS

CLINICAL LABORATORY OCCUPATIONS



APPENDICES

A. Sample pages of instructional units

1. Dental
2. Clinical Laboratory
3. Medical Records/Circulatory System
4. Medical Records/Digestive System

B. Sample pages of performance checklist

1. Nursing: Handwashing Technique for Medical Asepsis
2. Clinical Laboratory: Collection of Clinical Specimens - Preparation of Blood Smears
3. Inhalation Therapy: Operation of Bubble Humidifier
4. Electrocardiography: Run an ECG - Application of Electrodes and Leads (2-c)

C. Sample JOB

1. Nursing: Handwashing
2. Clinical Laboratory: Separating Clinical Specimens - Checking the Centrifuge.

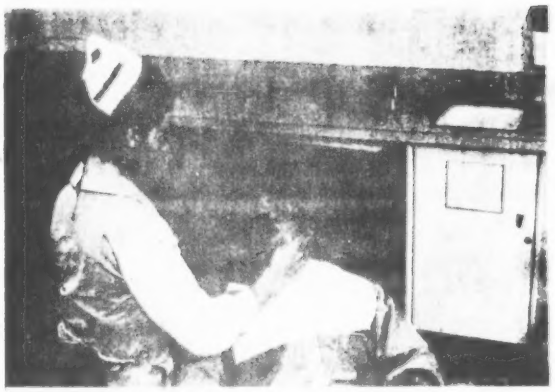
D. Organization of Instructional Material from Module Curriculum

1. Nursing
2. Clinical Laboratory

MANDIBULAR RIGHT POSTERIOR TEETH (#32-#28)

BUCCAL ASPECT

1. You should be positioned at the side of the patient. His mouth should be level with or lower than your elbow. The headrest and backrest should be positioned so the patient's neck and spine are in a straight line.



2. Tell the patient to turn his head slightly away from you. This position allows maximum direct vision. Instructions to the patient should always be polite verbal commands. Do not turn the patient's head with your hands because this would break the chain of asepsis and you would have to rewash your hands.

3. Pick up the mirror with your left hand. Insert the mirror head so that it is parallel to the occusal plane. Then move it laterally to the buccal mucosa.

this label on a Papanicolaou jar. Fill out the appropriate Pathology Lab slip.

Fig. 1

6. Carefully remove the tubes at the end of the 10-minute period by twisting them out of the centrifuge container. Discard the supernatant by pouring it into the sink.

7. With the tube held in a horizontal position, carefully tease out the sediment, using the special cytology spatula (Fig. 2). Smear this material thinly onto the slide previously prepared with the egg albumin (Fig. 3). Prepare one or two slides for the sediment samples from each of the centrifuge tubes.

8. As each slide is prepared, put it into the Papanicolaou jar containing a fixative (see Appendix).

9. Take the Papanicolaou jar to the Pathology Lab for staining, along with the laboratory slips.

F. General Comments

1. A variety of modifications are available for the collection of gastric material for cytology. There is little to suggest that one method is superior to another. The essential features of a good collection are:

   a. thoroughness of the barbotage
   b. maintenance of the cold environment for the material collected
   c. the rapidity of processing, from collection of the material to immersion of the slide in the fixative.

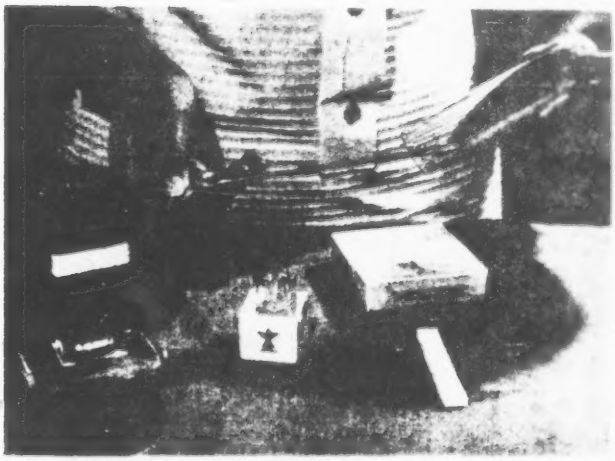


Fig. 2

Fig. 3

THE GASTROINTESTINAL SYSTEM

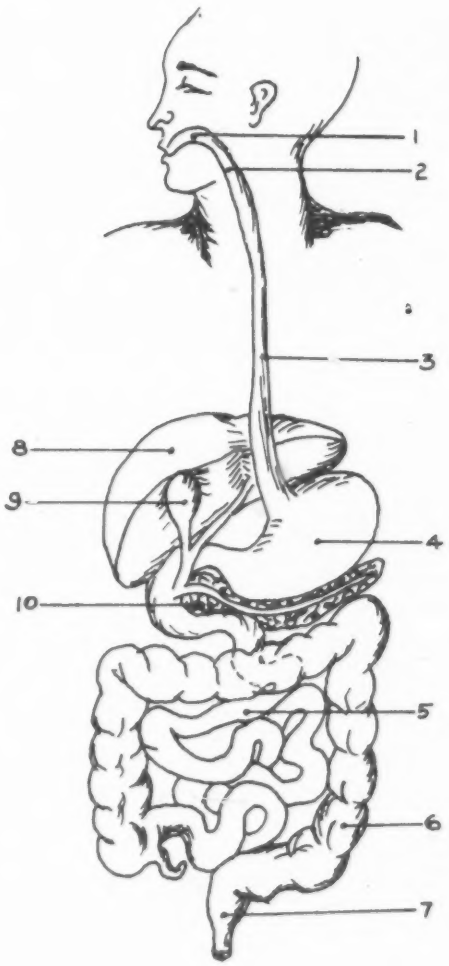
Food must undergo certain radical changes before the body can make use of it. The gourmet dinner eaten in an elegant restaurant shares the same fate as the snack in front of the TV. Nature has equipped man's body with a digestive system that requires little assistance from his conscious mind. The moment the food is swallowed, the automatic process begins. The digestive system, like an automated factory, starts by ordering and feeding the supplies to the machine, which automatically performs all the necessary steps to the point of disposing of the output.

Figue 1 shows the continuous passageway extending throughout the body. It is made up of several sections starting with the mouth (1) into which food is taken, proceeding to the pharynx (2), then to the esophagus (3), the stomach (4), the small intestine (5), and the large intestine (6), terminating at the anus (7) where the solid wastes are expelled. The total passageway has several names: the alimentary canal, the digestive tract, and the gastrointestinal tract (abbreviated as GI tract). "Gaster," or "gastero," a Greek word meaning stomach; "aliment," a Latin word meaning food; and "enteron," a Greek word meaning intestine, are the origins of some of the words used to describe the digestive system. Gastroenterology is the study of the digestive system.

The digestive system has two important functions. The first is the digestive process, which converts food to a state capable of being taken into cells by way of the blood and lymph channels. This process is both mechanical and chemical. The mechanical process moves the food along the tract and breaks it into fine particles. The intestinal glands produce enzymes that attack the food and break it down into smaller particles; this is the chemical part of the process. The second important function is the absorption which transfers the digested food from the intestinal tract into the blood stream.

A group of organs, the liver (8), the gallbladder (9) and the pancreas (10), are vitally involved and necessary for the digestive process, although they are not a part of the alimentary canal.

FIGURE 1



A. Identify the parts of the digestive system in Figure 1.

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

B. Fill in the blanks with the correct answer.

1. What part of the word gastroenterology means stomach? _____
2. Alimentary is derived from the word _____, meaning food.
3. The two chief functions of the digestive system are _____ and _____.
4. The digestive function includes a _____ process and a _____ process.
5. The _____, _____, and _____ are not a part of the alimentary canal but are essential for the digestive process.
6. Enteron means _____.
7. Combine the words gaster and enteron to make a word which means a study of the digestive system. _____.

C. If a child were to swallow a penny, name the route in the gastrointestinal tract it would travel before it is expelled.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

For answers see Page 48

THE HEART

1. Sections of the Heart

The terminology to be learned in this section is particularly significant because the words will occur over and over again in your medical transcription. Every medical specialty includes information regarding the circulatory system in examination and diagnosis. The causes of death in this country list cardiovascular disease as number one (over 50 percent); all other causes comprise less than 50 percent. For the thousands of people who receive proper medical care there is great hope of survival, whereas twenty years ago many of the heart and blood vessel disorders were considered hopeless.

You have just read two important words that form the basis for this section:

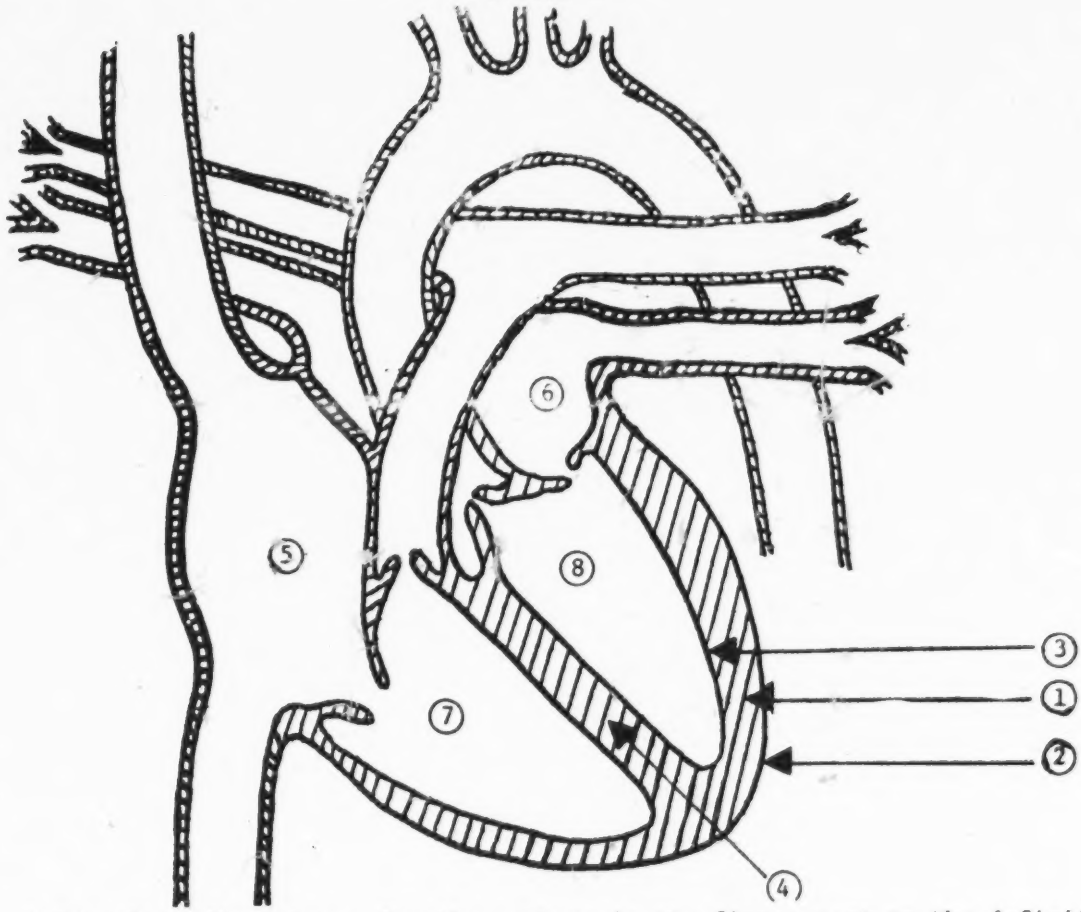
Cardio = heart
Vascular = blood vessel

Your heart is a powerful, long-working, hard-working pump which is the most intricately woven muscle in the body. Its main function is to pump blood to the lungs and to all the body tissues. It pumps an average of five quarts of blood in a minute so that by the time one reaches the age of seventy, his heart will have pumped 18 million barrels. This busy organ works twenty-four hours a day.

Let us look at the design of this remarkable and vital structure. (See Figure A.)* The heart, weighing well under a pound, is a hollow organ. The wall of the organ is a tough muscle called the myocardium (1). The cover that surrounds it like a fibrous bag is the pericardium (2). The lining is a thin, strong membrane, the endocardium (3). The wall which divides the heart cavity down the middle into the right side and left side is the interventricular septum (4). Each side of the heart is divided again into an upper chamber, right atrium or auricle (5) and left atrium or auricle (6), as well as a lower chamber, the right ventricle (7) and the left ventricle (8). Thus, there are four chambers. The blood which moves through them is regulated by a system of valves.

*View all figures as though you were standing behind them and viewing them on yourself.

FIGURE A



A. Write the medical terms for the numbers in the figure next to the definitions below:

1. _____ Muscular wall of the heart
2. _____ Outer surface of heart
3. _____ Inner surface of heart
4. _____ Wall dividing right from left side of heart
5. _____ Upper right heart chamber
6. _____ Upper left heart chamber
7. _____ Lower right heart chamber
8. _____ Lower left heart chamber

B. Write the word or word part in front of its meaning:

Inter
Septum
Cardio
Atrial
Peri
Endo
Myo
Ventricle
Ventricular
Vascular

1. _____ Pertaining to upper chamber of heart
2. _____ Part of a word meaning heart
3. _____ Part of a word meaning outer covering
4. _____ Part of a word meaning an inner lining
5. _____ Pertaining to a lower heart chamber
6. _____ Pertaining to a blood vessel
7. _____ A wall
8. _____ Part of a word meaning muscle
9. _____ Part of a word meaning between
10. _____ A lower heart chamber

For answers see Page 60

PERFORMANCE CHECKLIST

Unit: Handwashing Technique for Medical Asepsis

Student: _____

Instructor: _____

Date: _____

	SATISFACTORY *	UNSATISFACTORY	NOT APPLICABLE	NOT OBSERVED
1. Stood away from sink so as not to have clothing in contact with sink.				
2. Turned water on; adjusted to warm temperature. Kept water running during entire procedure.				
3. Wet hands.				
4. Applied soap thoroughly; got under nails and between fingers.				
5. Washed palms and backs of hands with strong frictional motion (10 rotary movements for at least 20 seconds).				
6. Washed fingers and the spaces between them, interlacing the fingers, rubbing them up and down for 10 seconds (10 strokes)				
7. Washed wrists and above wrists three or four inches, using rotary action (10-15 times).				
8. Repeated steps 4 through 7 (completion of 2-minute scrub, 120 strokes).				
9. Paid special attention to problem areas.				
10. Rinsed well; ran water from wrists to fingers (final rinse).				
11. Dried thoroughly with paper towel from wrists to fingertips.				
12. Turned off water with paper towel and discarded in receptacle.				
13. Used hand-lotion if desired.				

* PASS _____ FAIL _____

AHPP 10/71

* Must have 100% satisfactory performance

PERFORMANCE CHECKLIST

Unit: Collection of Clinical Specimens

Student: _____

School or Facility: _____

Date: _____

	SATISFACTORY	UNSATISFACTORY	NOT APPLICABLE	NOT OBSERVED
PREPARATION OF THIN BLOOD SMEAR				
1. Placed a drop of blood on a clean glass slide.				
2. Held a second slide at 30° to 45° angle.				
3. Moved second slide back toward drop of blood.				
4. Allowed capillary action to spread drop along edge.				
5. Moved slide rapidly.				
6. Lifted slide at end of stroke.				
7. Air dried.				
8. Evaluation of the thin smear by the supervisor.				
PREPARATION OF A THICK BLOOD SMEAR				
1. Placed a drop of blood on a clean glass slide.				
2. Held a second slide at 65° to 80° angle.				
3. Moved second slide back toward drop of blood.				
4. Allowed capillary action to spread drop along edge.				
5. Moved slide rapidly.				
6. Lifted slide at end of stroke.				
7. Air dried.				
8. Evaluation of the thick smear by the supervisor.				

Instructor: _____ Performance Check Time: _____

Comments: _____

Trial No. 1: *Pass _____ Unsatisfactory _____

Trial No. 2: *Pass _____ Unsatisfactory _____

AHPP 11/71

* Must have 100% satisfactory performance

PERFORMANCE CHECKLIST

Unit: COURSE IV, ITEM 1: Operation of Bubble Humidifier

Student: _____

School or Facility: _____

Date: _____

	SATISFACTORY	UNSATISFACTORY	NOT APPLICABLE	NOT OBSERVED
1. Washed hands				
2. Collected the proper components (jar, lid, gasket, diffuser, flowmeter)				
3. Checked the condition of components (cracks, leaks, openings)				
4. Assembled equipment (diffuser, lid, flowmeter)				
5. Checked the unit for operation (leaks at 8 LPM- relief valve)				
6. Packaged equipment for storage				

Instructor: _____ Performance Check Time: _____

Comments: _____

_____

Trial No. 1: *Pass_____ Unsatisfactory_____

Trial No. 2: *Pass_____ Unsatisfactory_____

* Must have 100% satisfactory performance

AHPP 11/71

PERFORMANCE CHECKLIST

Unit: III: Run an ECG - Application of electrodes and leads (2-c)

Student: _____

School or Facility: _____

Date: _____

	SATISFACTORY	UNSATISFACTORY	NOT APPLICABLE	NOT OBSERVED
1. Collected all the materials that were needed.				
2. Exposed the patient's arms and legs.				
3. Applied the electrode conductor material to the area and rubbed it until the skin became slightly reddened.				
4. Placed the electrode over the electrode paste and reddened area.				
5. Fastened the rubber strap to the electrode and wrapped it snugly around the limb.				
6. Attached the two limb electrodes on one side of the body, then went to the other side to attach the limb electrodes there.				
7. Unrolled the patient cable and placed it on the bed and on the patient's abdomen.				
8. Attached the proper lead tip to the correct limb electrodes.				
9. Attached the chest lead to the chest electrode, but did not expose the chest at this time.				
10. Connected the patient cable to the electrocardiograph.				

Instructor: _____ Performance Check Time: _____

Comments: _____

_____

Trial No. 1: *Pass _____ Unsatisfactory _____

Trial No. 2: *Pass _____ Unsatisfactory _____

AHPP 11/71

* Must have 100% satisfactory performance

PURPOSEFUL CHANGE:
A DEVELOPMENTAL MODEL FOR THE NURSING PROFESSION

by Lucile Wood

Lucile A. Wood

For many years the nursing profession has tried with small success to meet steadily increasing health needs of the nation. At the same time, nursing has sought to attain equal footing with other professions.

I believe we can attain professional status by developing the nursing career on the basis of widely differing nursing functions in succeeding steps on a five-level career ladder. For my purposes, I use the term "function" to mean nursing activities and their consequences as they relate to helping an individual patient, student, or practitioner establish optimal relationships with the surrounding environment.

The following developmental model, describing differing functions of nursing practitioners, seems to be a valid approach. It is based on specific facts derived from the current studies of the UCLA Allied Health Professions Project (AHPP)*, recommendations from various nursing reports from 1923 to the present, various states' efforts to revise their Nurse Practice Acts, and personal observations.

LEVEL I is the entering curriculum in nursing. It includes the 60% of activities common to all practitioners (NA, LVN, RN) as revealed in the AHPP national survey. In addition to nursing skills, a moderate amount of technical and scientific information in physical and behavioral sciences and a minimum of general knowledge are included. Nursing practitioners have an opportunity to learn and practice basic nursing skills until a moderate competence is achieved. These practitioners would comprise an estimated 25% of the nursing work force.

LEVEL II of the model prepares what I choose to call the "basic nurse practitioner." This curriculum included the remaining 40% of activities identified by our Project report. These are the more complex nursing skills accompanied by beginning theory relating to human functions, and theory and practice in problem-solving, decision-making, and communication skills. I see this Level combining the strengths of the present LPN, Associate degree, diploma, and in some instances, baccalaureate curricula, to develop a competent basic nursing practitioner based on function. LEVEL II would comprise about 50% of the work force and would provide the bulk of direct nursing service to the patient.

If this basic nurse practitioner should become the second level in the career ladder, it would be possible to have only one nurse practitioner license, and to eliminate our present conflict between "Technical," "Professional," and the various licensed titles (LPN and RN).

LEVEL III would provide beginning skills and knowledge to teach, administer, or consult in a specialty area. Graduates could be employed as beginning faculty for Levels I and II, or in beginning administrative or specialist positions in health agencies.

Although the time taken to attain this level may be comparable to the present baccalaureate degree, I'm not at all certain that two years would always be required to complete this level. For example, the basic nurse practitioner could select one of several additional courses to pursue (critical care nurse, inhalation therapist, pediatric nurse assistant or associate, etc.) - all accomplished with differing time elements.

If our aim is to prepare a nurse to function differently at each level, a degree may or may not be necessary. This point is currently debatable. Nurses should understand that there is a difference between proficiency in nursing practice and fulfillment of requirements for an academic degree. It seems to me that practice and degree should be complementary and voluntary activities, and not mandatory for everyone.

LEVEL IV content would be of an advanced academic nature and would prepare teaching faculties for Levels II and III Programs, as well as administrative personnel for large health agencies. I believe that beginning research methodology should be offered so these graduates could be strong supporters of nursing research and could assist in identifying researchable clinical nursing problems.

Although Level IV would not at this time include high level nursing theory, this would be expected within the next decade if Level V of this model were fully implemented! Graduates of Level IV would comprise about 9% of the nursing work force.

LEVEL V would prepare the nurse researcher and would be on the level of present doctoral programs. If 1% of the nursing population could, IN FACT, be engaged in nursing research, we could expect to attain our professional status equal to or better than other true professions within the foreseeable future.

I see this five-step functional model as being a sound model for developing nurse practitioners. More importantly, each level would include increasing and cumulative competence in nursing practice, decision-making, problem-solving, and in administrative, teaching, and communication skills.

Since the functions outlined in the model are widely different, it would be possible to define a more precise curriculum.

Because the programs would prepare widely different kinds of practitioners, a more proper utilization of the graduate could be expected.

The developmental model would permit a basic nurse practitioner license based on function. There would be a built-in means to continue education whenever needs produce a change in career goals.

The ultimate outcome of the implementation of this model would not only help nursing to achieve professional status, but most important, would realistically prepare and utilize every member of the nursing work force, directing all their efforts toward the provision of high quality nursing care.

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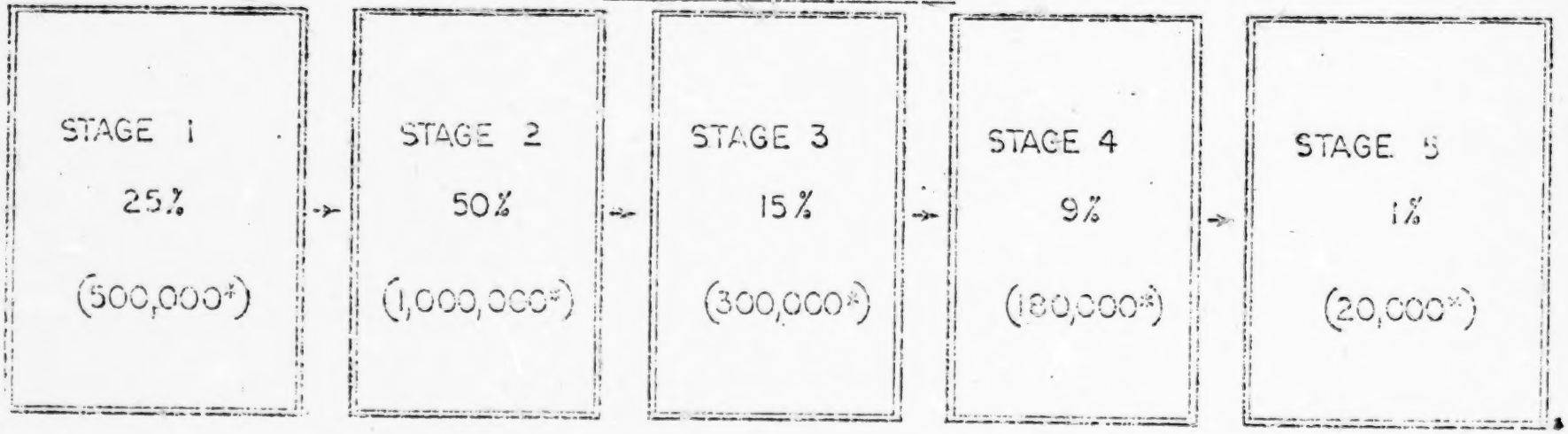
*Wood, Lucile A. and Thomas E. Freeland. Progress Report, Nursing Occupations. Los Angeles: UCLA Allied Health Professions Project, April 1971, pp. 13-31 ($2.36).

Goldsmith, Katherine L., Mary E. Jensen, Lucile A. Wood, and Don Zimmerman. A Study of Nursing Occupations. Los Angeles: UCLA Allied Health Professions Project, April 1970 ($4.67).

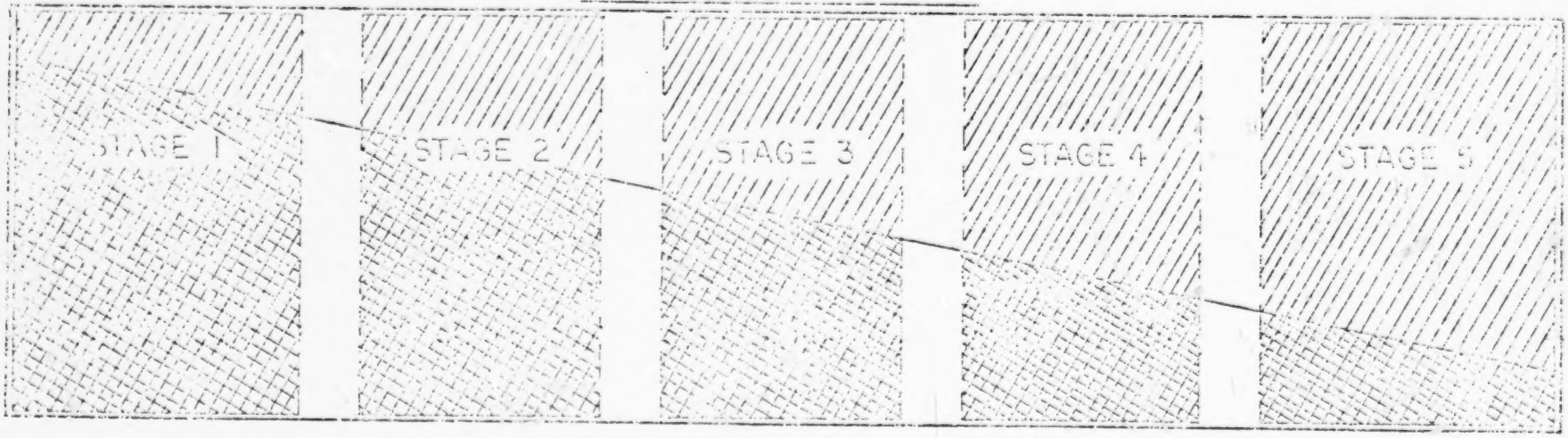
Both publications are available through UCLA, Division of Vocational Ed, 1003 Wilshire Blvd., Santa Monica 90401. Checks made out to the Regents of the University of California should accompany the order.

CAREER SEQUENCE FOR NURSING OCCUPATIONS

STAGES OF NURSING



KNOWLEDGE/SKILLS RELATIONSHIP TO STAGES OF NURSING



*PREDICATED ON BASIS OF TOTAL NURSING POPULATION OF 2,000,000

= KNOWLEDGES

= SKILLS

IHPP 3-72

LAM/JKH

THE RESULTS OF THE APPLICATION OF A MODEL OF NURSING BASED ON FUNCTION WOULD:

1. Prepare better nursing practitioners at each level,
2. Permit widely differing functions at each level, which would more precisely define curriculum content and the ultimate utilization of personnel.
3. Eliminate the present conflict among the various levels of nursing practice from the MA to the PhD,
4. Permit a basic nursing license based on function, and provide a means to continue education at any time that needs and desires produce a change in career goals.
5. Avoid duplication and overlapping of content, probably shortening the time needed to achieve a given level of practice. Although the length of time might be diminished, we would expect a better equipped performer of nursing practice and one with a sound base of theoretical knowledge.

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lbt